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Council of Industrial Design

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Design

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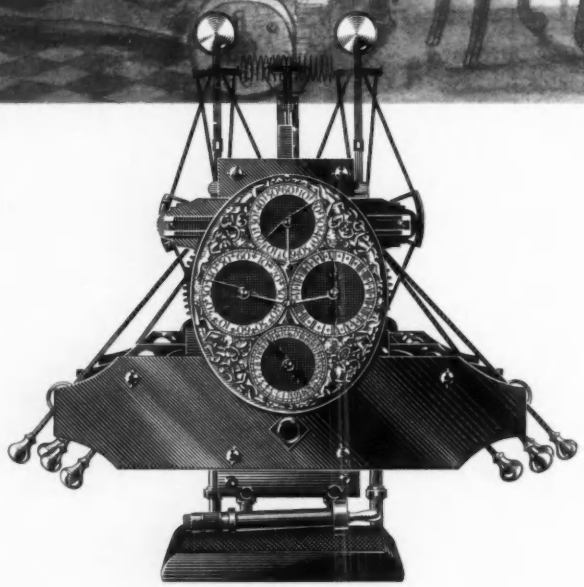
PERIODICALS

PROFILE OF A CREATIVE MIND

No. 9 Chronometer-Maker

John Harrison (1693-1776) was a self-educated carpenter who constructed the first timekeeper to perform accurately on board ship. This forerunner of the modern marine chronometer solved the age-old problem of finding longitude at sea.



In theory, it is possible to find longitude—a vital factor in plotting a ship's position—without a chronometer. In practice, however, an accurate timekeeper is a necessity. Until Harrison came upon the scene the difficulties inherent in such an instrument had been considered almost insurmountable. The varying motion of a ship, changes in temperature, and corrosion due to the elements had combined to defeat the best efforts of earlier inventors. Harrison, who had never served a day's apprenticeship to any clockmaker, was the first to appreciate the real problems involved, and to provide workable solutions to them. The five marine timekeepers which he designed and built are still working well—a fitting memorial to a man who saved countless ships and sailors from disaster.

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invite designers to enter a competition for

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Closing date for entries, 30th May, 1958.

Announcement of winners, 30th June, 1958.

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CENTENARY COMPETITION,
ARTHUR SANDERSON & SONS LTD.,
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2. Designs for a fabric—with five prizes of £100 each.

3. Complementary designs for wallpaper and fabric—with five prizes of £150 each.

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Mr. Paul Reilly. Mr. Humphrey Spender, A.R.I.B.A.

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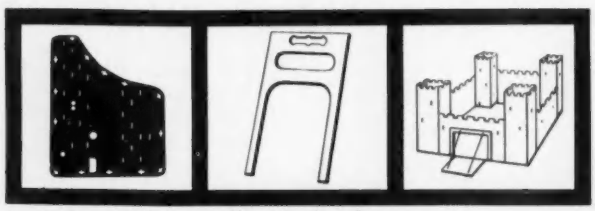

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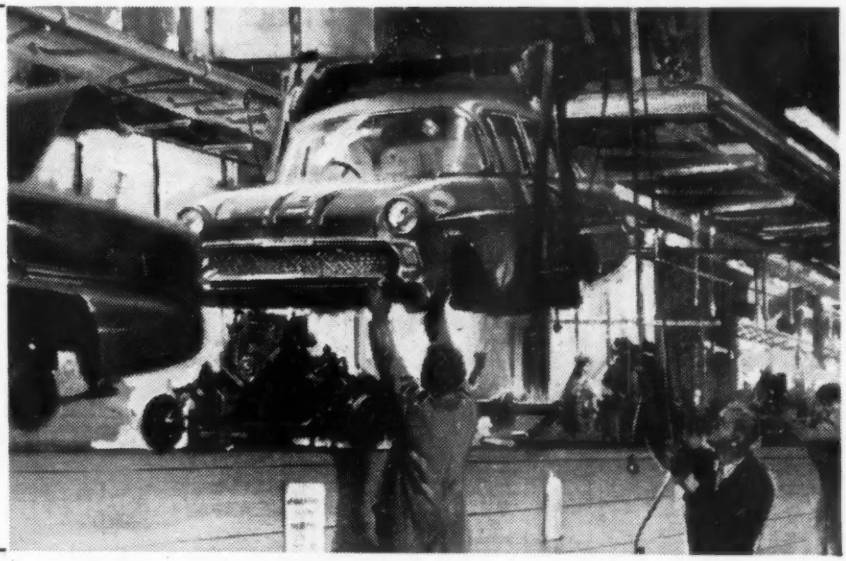

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For every British family that had a car ten years ago, nearly two families have cars today—a total of nearly four million cars. Thus electricity, which powers the factories that make the cars, helps to bring the convenience of motoring to more and more people. Serving the motor car manufacturers, and prominent in every type of industrial activity, ENGLISH ELECTRIC supplies a great range of motors and control equipment to harness the mighty power of electricity for everyone's benefit.

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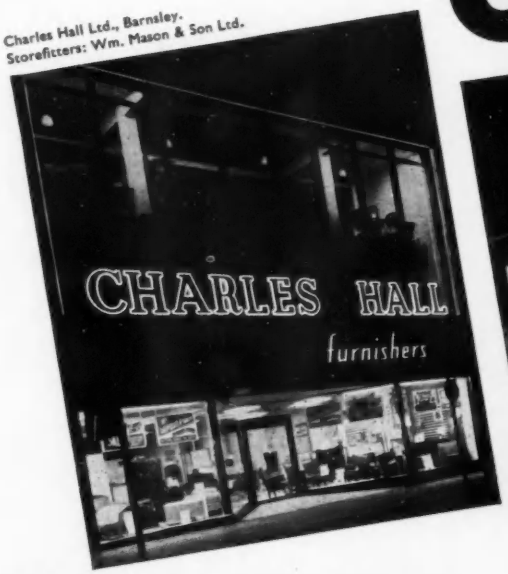

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Architects: Staff Architects Dept. Hepworths Ltd.

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The Times Furnishing Co. Ltd., Maidstone.
Architect: Carl Fisher, Esq., A.R.I.B.A.

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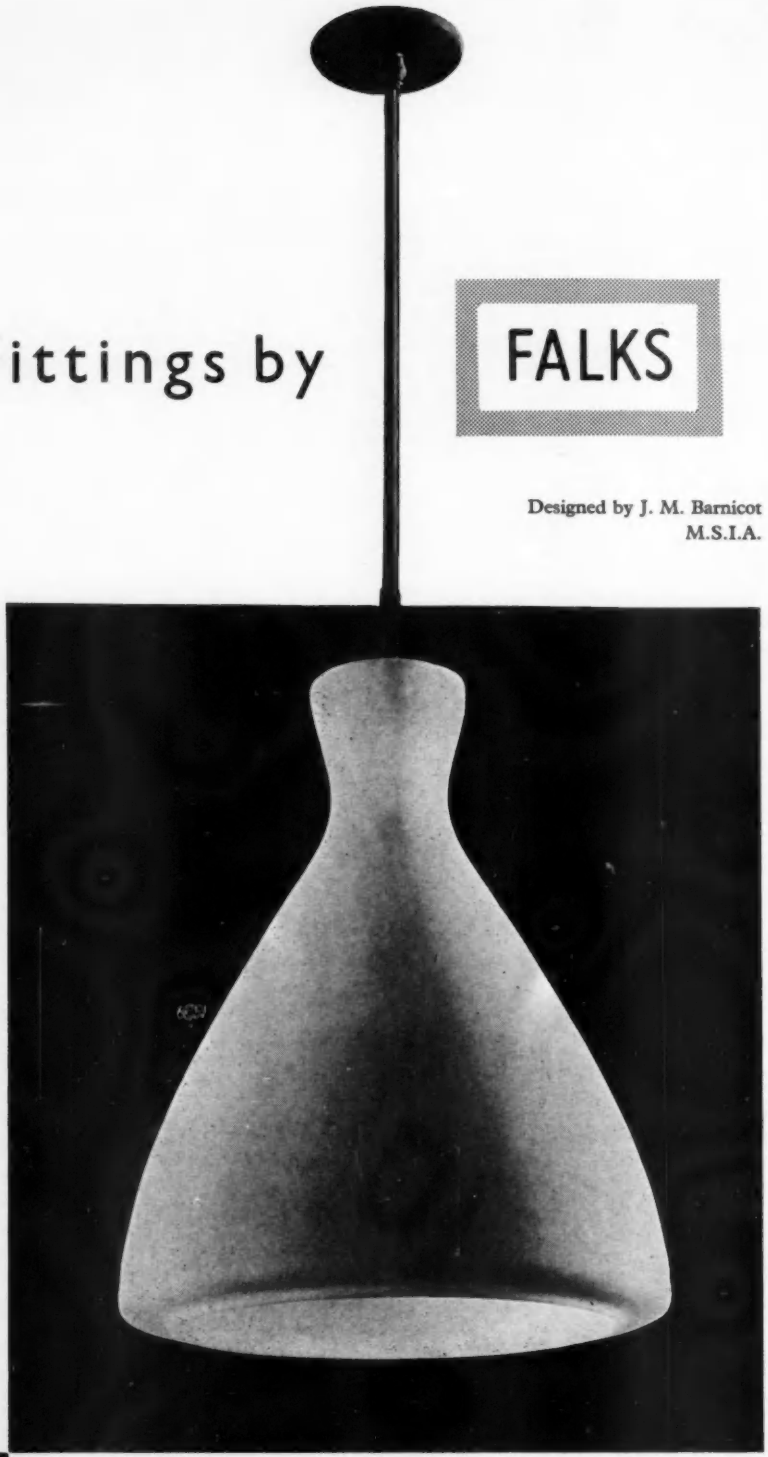
Mercury Fittings by FALKS

Designed by J. M. Barnicot
M.S.I.A.



Designed for use with either 100/150-watt or 75-watt lamps, there are 9 versions of this fitting, it can be supplied as a 6-lt. 5-lt. 3-lt. or 1-lt. pendant fitting, or as a 1-lt. wall bracket for 75-watt lamp. White satin opal glassware in two sizes, is suspended by 3-core white circular flex with polished brass cover plate and arms, and steel bronze centre ring.

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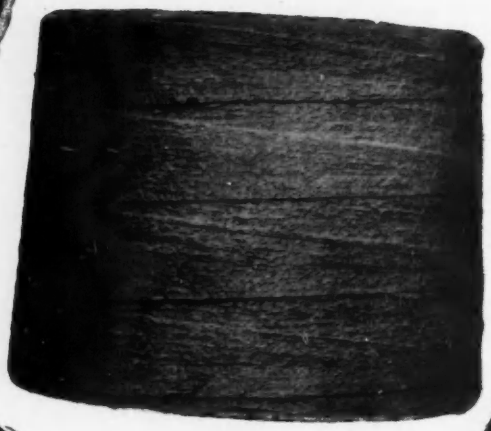

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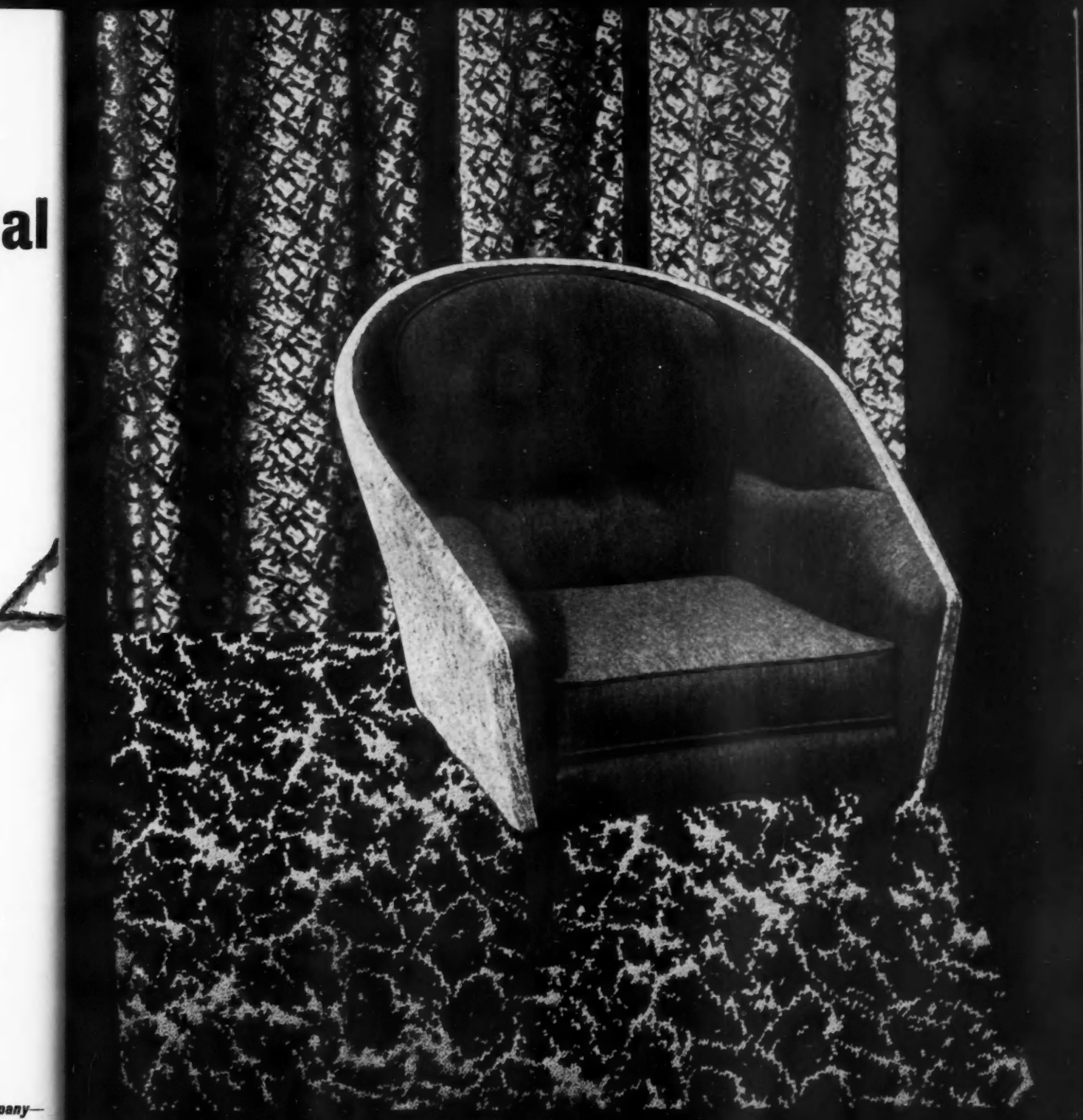

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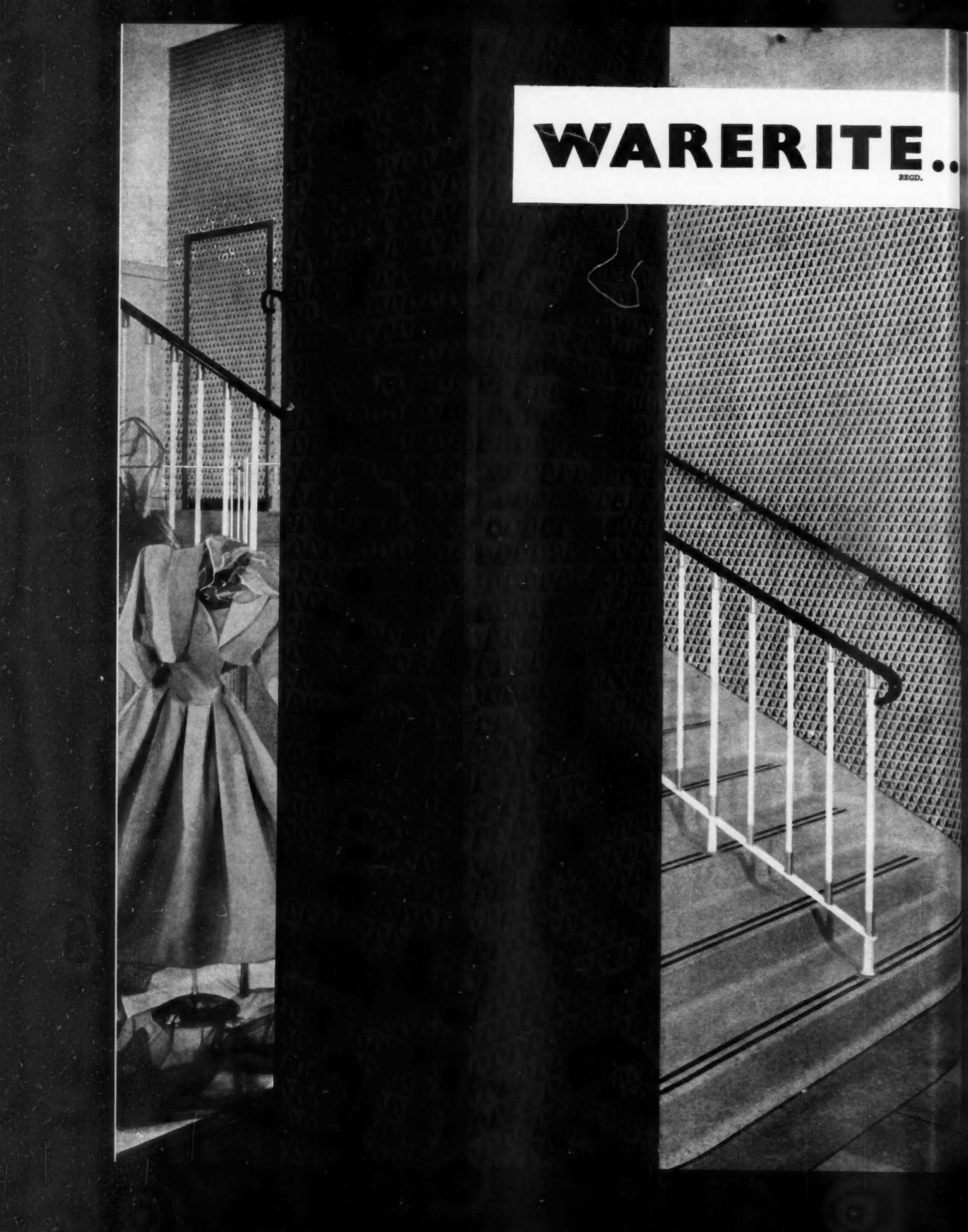
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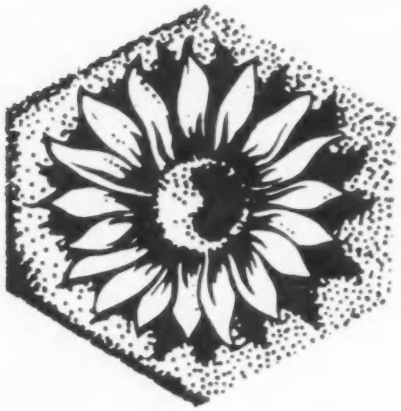

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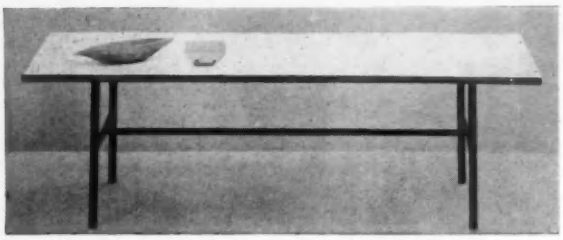

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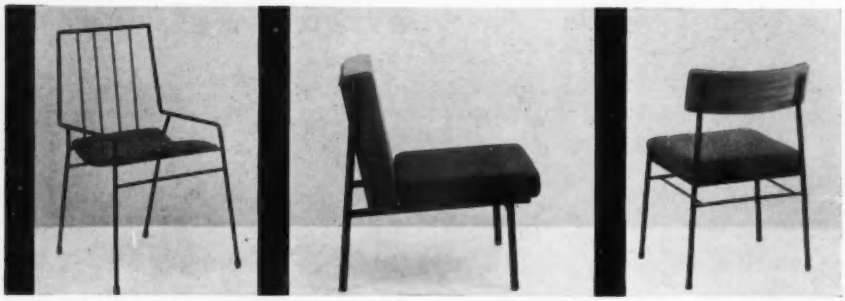

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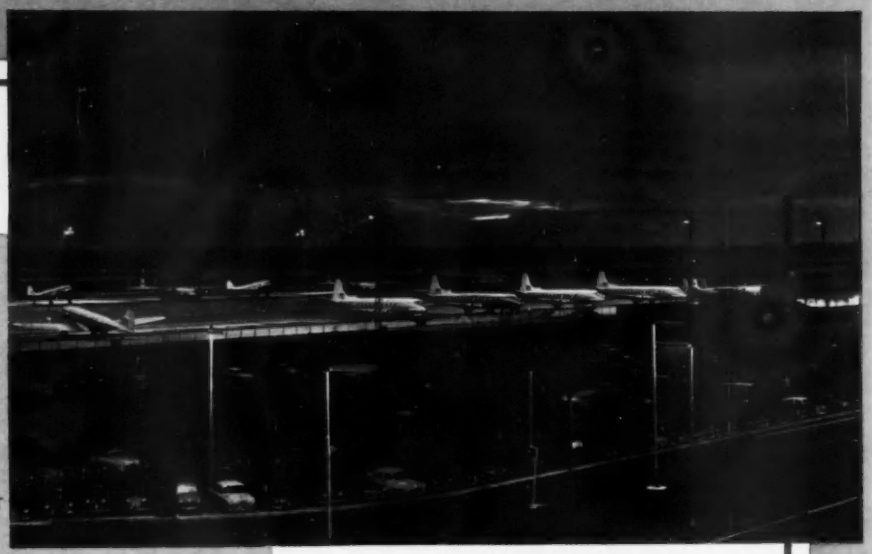

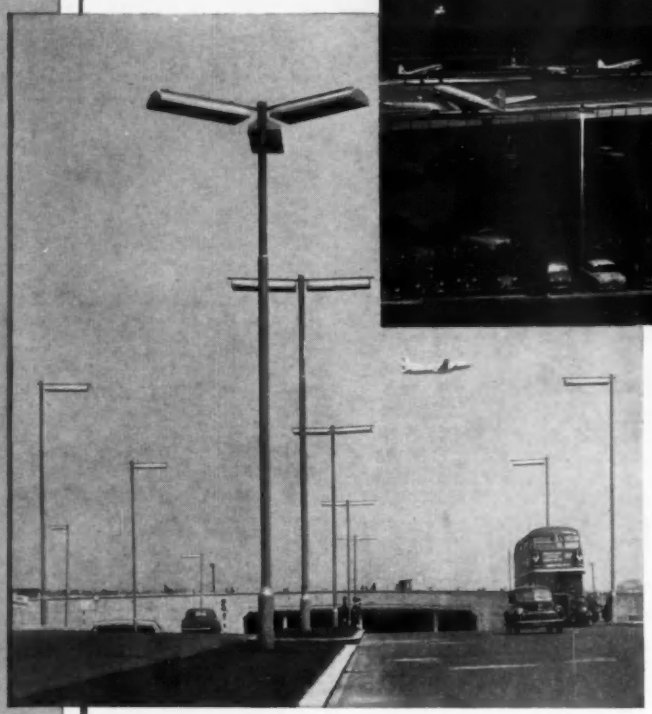

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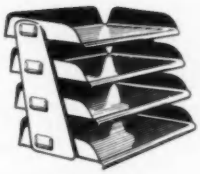
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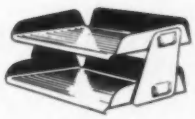
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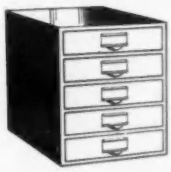
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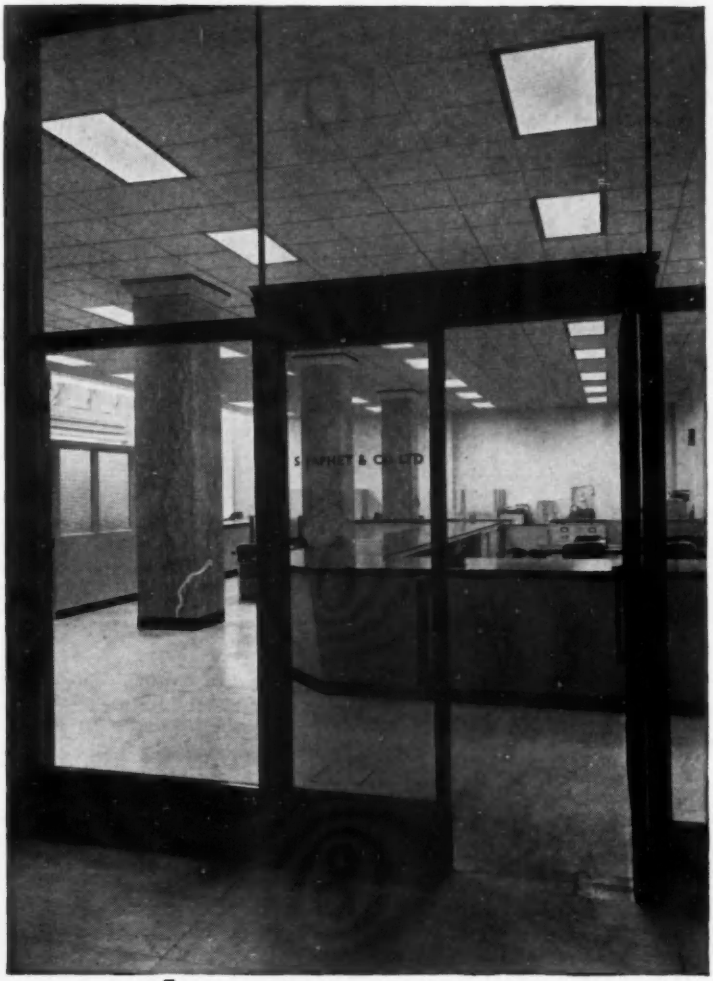

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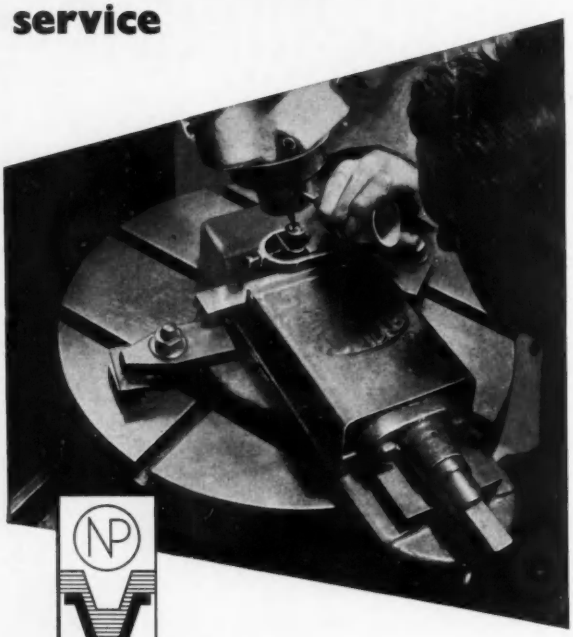

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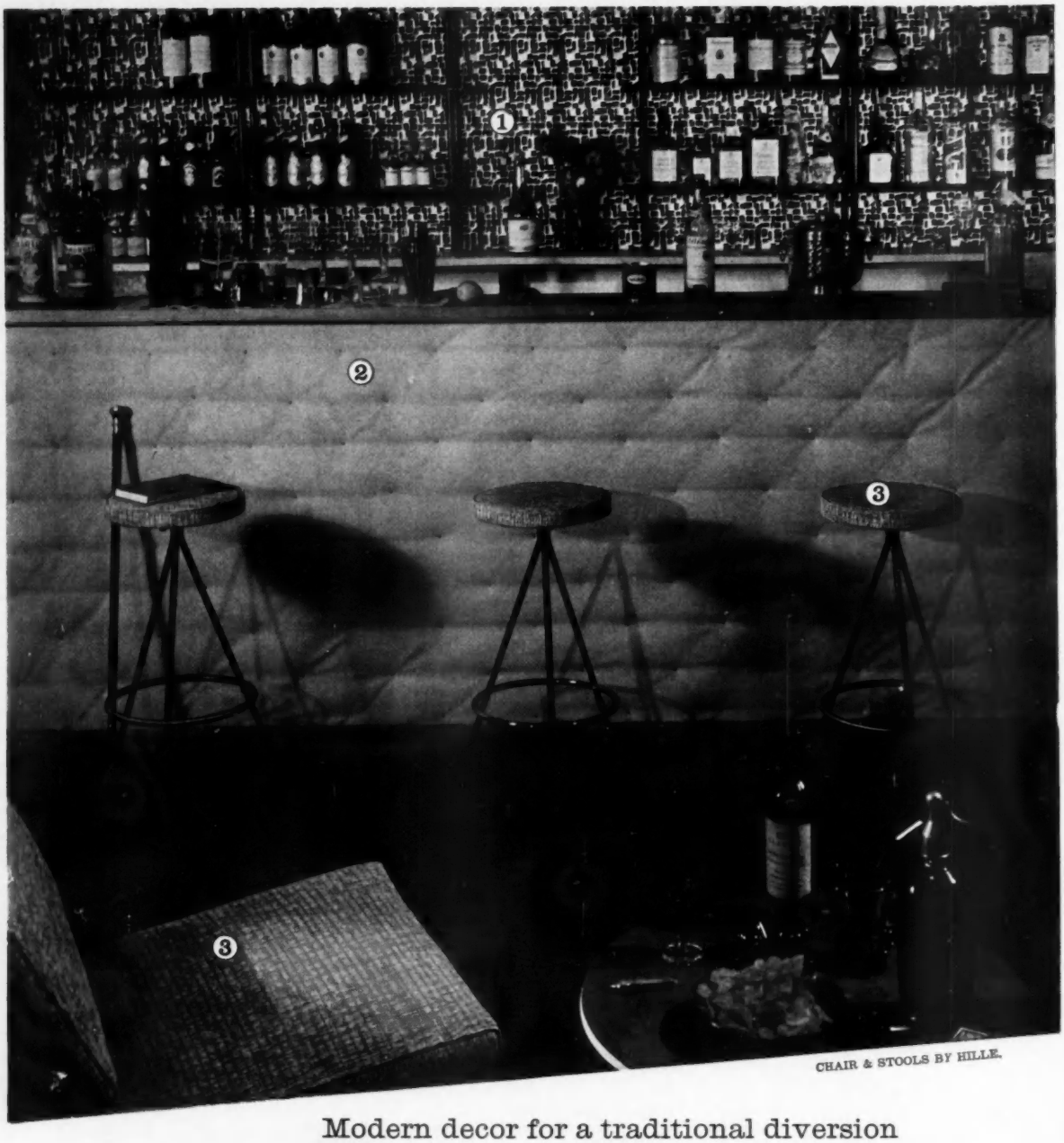

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Number 111

March 1958

Design

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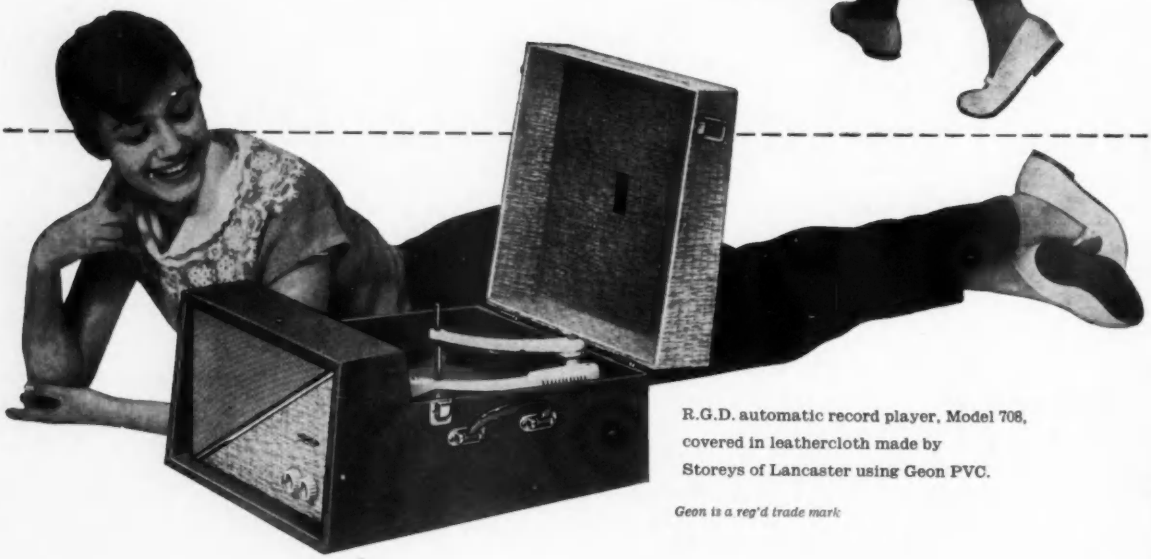

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The ninth heaven

INDUSTRY IS NOT so rich in ideas that it can afford to overlook any sources of inspiration. Most European countries are accustomed to an easy interchange between factories and independent studios or workshops, but in Britain what should be a domestic fence dividing neighbours can be a veritable stockade. The historical accident of being the first industrial nation made such an impact on Britain's economic and social structure that the manufacturer and the craftsman have been at odds ever since; both sides have suffered from the isolation. Cut off from healthy, vital markets, craftsmen have led a withdrawn, esoteric existence, pinched by neglect but sustained by local successes in Cornwall, Chelsea or the Cotswolds. Industry has forgone much of their creative talent, their genuine ability to maintain the elusive characteristic of quality from the original idea through all stages of making, which is the long suit of the man who both designs and makes. Despite this sad situation the craftsman gave inspiration to the Modern Movement in architecture, and the Gimson tradition cleared the way for some of the best factory furniture of today.

This potentiality of the independent craftsman to interpret current trends is not exhausted; if he is willing to expose himself to the influences of the world around him he can quickly experiment and develop what is acceptable. It was particularly clear in the recent display of the Arts and Crafts Exhibition Society, that the younger potters have great vitality and promise. Some of them would surely welcome an opportunity to test their talent against the discipline of factory production, backed by modern industrial equipment and the skill of highly trained operatives. The best will only be birds of passage because their value would diminish if they were tied to the factory floor; but both studio and factory could profit from a brief alliance.

The classic example is the great Arabia factory outside Helsinki, where on the ninth floor artists are invited to work in studios with full freedom to co-operate with research and technical staff. Here they carry on individual work, but they are also asked to submit to the design committee of the factory whatever they think may be suitable for production. At first, contact between this ninth heaven and the factory below was remote, but both sides learnt much from the other and gradually the whole factory has been influenced for the better.

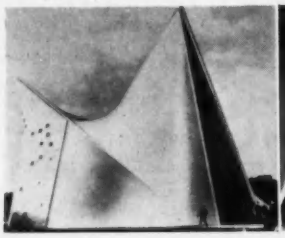
The difficulties are familiar to the pre-occupied manufacturer, but maybe the time has come for a little talent spotting in the more progressive studios and workshops; to see more of the craftsmen's exhibitions, to buy their pieces and discuss them in the factory, to ask their authors to come and explain themselves (see pages 55–57 for example) and even give them facilities to develop promising ideas. J.N.W.

Brussels *exhibition*

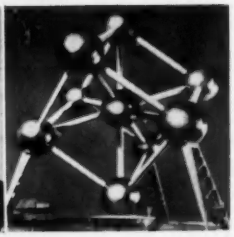
What to see and how to get there

Entrance hall of the Exhibition

Phillips' sa pavilion

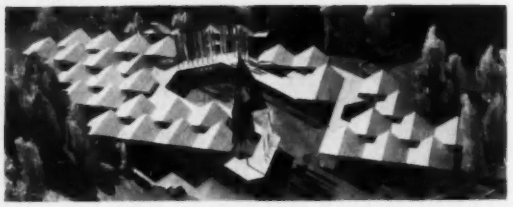


Atomium



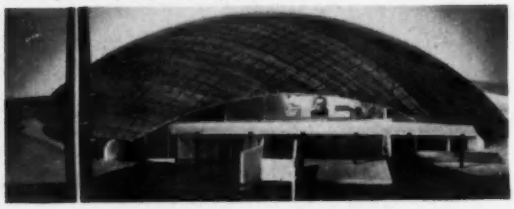
United Nations pavilion

Swiss pavilion



Belgian civil engineering pavilion

Fauna pavilion, Belgian Congo section



The 'Brussels Universal and International Exhibition' will be open on April 17 until October 19. It is the largest exhibition of its kind ever to be held and the overall theme is the progress of mankind in the arts, science and industry. The central feature and symbol of the exhibition, in the same way as the Eiffel Tower was the symbol of the Paris World Fair in 1889, is the Atomium, 350-ft high, representing the structure of an iron crystal.

The exhibition site itself is on the northern outskirts of Brussels and covers about 500 acres – an area practically a third of the size of the city itself. In addition to the exhibits by 45 countries including the UK (DESIGN December 1957 page 67; February page 20), Belgium, France, Federal Republic of Germany, Italy, Netherlands, USA, Canada, Brazil, USSR, Hungary, and several organisations like the United Nations, European Coal and Steel Community, International Red Cross, there will be a number of central features such as the International Hall of Science, an International Palace of Art, a children's section and extensive gardens.

During the exhibition there will be several international congresses, the most important of which are the World Congress of Chambers of Commerce, the International Chemical Engineers' Congress and the British Electrical Congress. There will also be special events including a world film festival, a jazz music festival and an international vintage car rally.

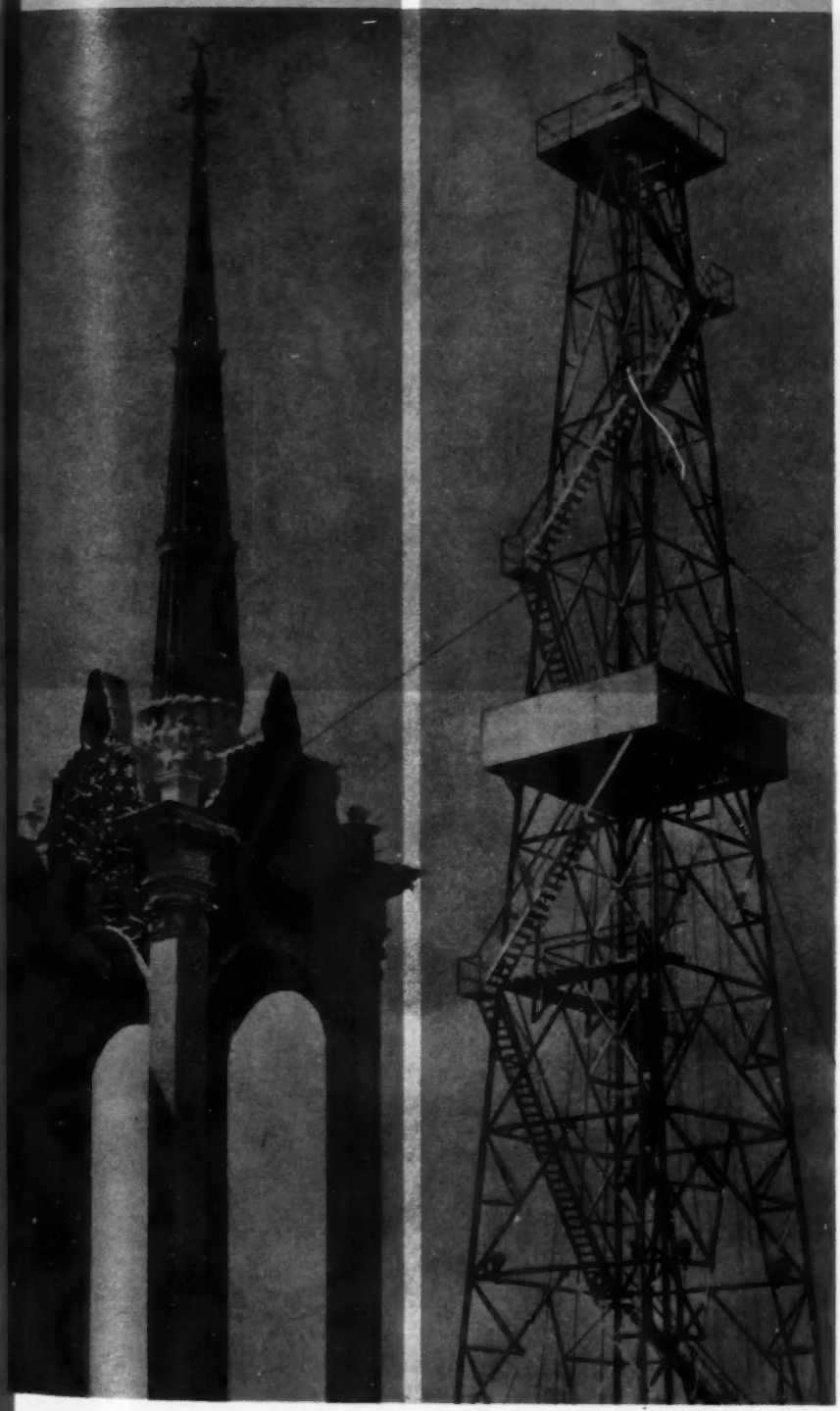
Each participating country will have its own national day or days, and will be responsible for special features during that time; the British national days will be July 10–12,

Special arrangements have been made by the Belgians to cope with the 30 million people who are expected to visit the exhibition. Some of the main roads in Brussels have been reconstructed and the Ostend–Brussels road has been transformed into a new motorway. Parking facilities will be made for over 30,000 cars, and overseas visitors will be able to hire cars at their ports of disembarkation. There is a specially constructed airstrip at the exhibition to link it by helicopter with the main air terminal and with the larger cities in Belgium, France, Holland, and Germany.

Airlines with regular services to Brussels include Sabena, BEA, KLM, PAA, SAS, and Aer Lingus. Belgian, French, British, Dutch and Norwegian lines calling at Antwerp, Zeebrugge, Ostend/Le Havre, Dunkirk/Southampton, London/Rotterdam, Amsterdam and the Hook of Holland are suitable for sea travel to the exhibition, and Brussels is connected by train and coach services with most of the principal cities in Europe.

An organisation called *Logexpo* has been set up to provide accommodation for visitors. It maintains lists of hotels and accommodation in private houses. Two motels will also be available, each with over 2,000 rooms. The total accommodation provided by *Logexpo* will be sufficient for about 50,000 visitors each night. For details of accommodation, intending visitors should write to *Logexpo*, 35 rue Belliard, Brussels, or consult a travel agent.

REPORT *on* RUSSIA



PAUL REILLY

It is rare to read a first-hand report on Russian design. The author of the following article had exceptional opportunities on a visit to Moscow last year to see new Russian buildings and products and to meet some of the men responsible.

Russia

1 and 2 Two examples of the exuberant, pastry-cooks' architecture so popular in Stalin's time. 1, the famous University skyscraper, 2, a typical street scene. However much they may be criticised in detail, the Moscow skyscrapers add most effectively to the townscape and skyline.

IT WOULD BE QUITE TEMPTING for the average weste visitor to Moscow to come to the conclusion that t Russians take no interest in industrial design. All t evidence in the streets and shops points in that dire tion. One's first impression of modern Russia may w be the Moscow airport building, a boring, tiere structure with an interior recalling some cross betwee a funeral parlour and a late nineteenth century Germa boarding house, so heavy are the dark velvet drapes, deep the pelmets, so old-fashioned the velour cloths the tables and the Oriental mats and brass chandelier

Indeed wherever one goes, whether above ground below, one cannot escape the impression that this ne world is being built with the cast-off symbols of t old – pediments, porticos, pilasters, cornices, balustr ded balconies, cast concrete trophies, laurel wreaths, short all the imperial impedimenta and classical par phernalia that Napoleon re-introduced as the hal marks of authority and on which each succeedi dictator has drawn heavily to establish his *bona fide* The parallel is close, even to the purposeful breadth the great axial streets. The only difference is that

3 and 4 Pressure on living space has led Russian designers to explore multi-purpose furniture such as this student's desk-cum-bed unit. The ingenuity of the idea is often let down by shiny finishes and coarse detailing.

5 and 6 As in the West, Russian furniture shows very mixed standards of design. There is little to compare with the best standards of contemporary European design, but much that is familiar in the utilitarian, 5, and the traditional, tradey, 6, ranges.

Russia this style is termed Socialist-Realist, as being the manner most easily grasped by the architecturally illiterate (our early Corner Houses earned fortunes on the same principle since they too were catering for the masses).

There is perhaps some comedy in the inescapable equation of communist with 'reactionary, capitalist, bourgeois' taste, and more irony in the double condemnation of modern western architecture by both Hitler and Stalin, by the former as decadent Bolshevik, by the latter as decadent bourgeois art.

Influence of architecture

The architectural scene, as prescribed by Stalin, has naturally closely influenced all those industries that serve to complete a building. Even though the Stalinist exuberance has since been criticised by the Party as wasteful and extravagant, there seems to be some time-lag between the rejection of the old and the introduction of the new architectural line, for the latest Moscow dwelling blocks, though simpler, are basically the same neo-classical lumps, but stripped to the bone – one cornice instead of six, ten balconies instead of thirty. One result of the still dominant role of this classical school is that the average Russian furnishings, whether soft or hard, have a staid, bourgeois look in the higher reaches (for hotels and offices, for instance) and a commonplace vulgarity in the lower.

It is sad, though perhaps to be expected in view of their propensity for copying, to see in the shops and showrooms replicas of all the worst faults of which our own mass production furnishing industries have been guilty – over-pretentious patterns on cheap cloth, too much shine on cheap furniture, table glasses cut to ribbons, gilt galore on tea sets, and the most banal of *bric-à-brac* for fancy goods. A new magazine on consumer wares reveals a standard not far removed from the worst of our own mail order catalogues.

All this is understandable. A proletarian community likes its gingerbread well gilded; a suddenly decapitated society naturally clings to the trappings of the vanished class; a country isolated from world trade suffers an inevitable time-lag; a nation with so great a back-log spends time and effort on quantity before quality – it is

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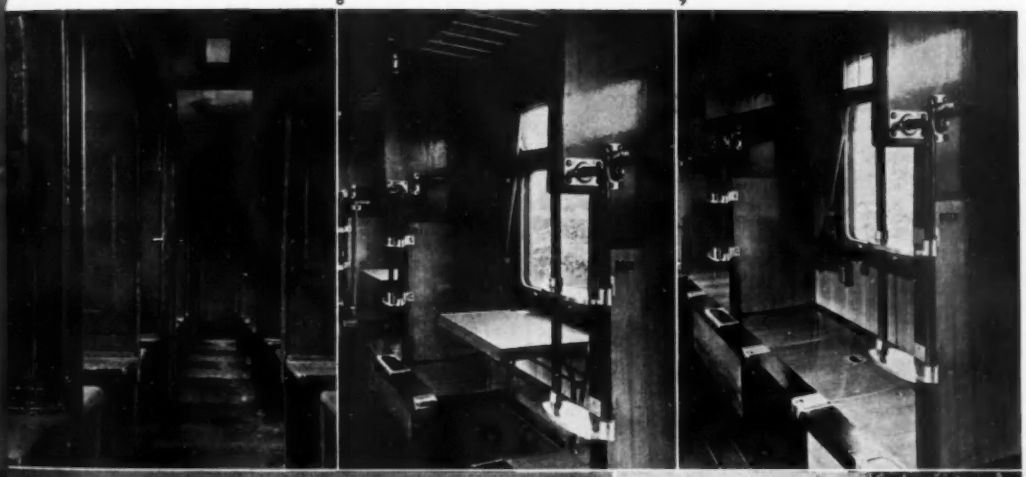

7, 8 and 9 The Russians are rightly proud of the great steps forward that have been taken in the design and construction of their railway rolling stock; the results are more interesting where less effort at interior design is made, as in this cheapest type of accommodation. **7**, a traditional fourth class 'hard' coach; **8** and **9**, the same type redesigned today, arranged for day and night travel.

10 This lush interior, reminiscent of our early Pullman coaches, is typical of the immediate post-war style of Russian railway restaurant cars. More recent efforts are less pretentious, though still ornate by our standards.

11 The front of a powerful diesel-electric locomotive on show in the great permanent 'Industrial Exhibition' in Moscow. The decoration owes much to Western malpractices, though the normal green and yellow livery of local Russian trains is unexceptionable.

Russia

easier to make minor variations on the familiar themes to which the factories are accustomed than to think up fresh designs; and, lastly, a country that is so rapidly undergoing its industrial revolution works to a system of priorities that leaves the study of consumer goods far down the list. It is, of course, none the less depressing to the visitor to be faced on all sides with so monotonous and dowdy a standard, whether in clothing, housing or consumer goods, but should one argue from that that the Russians are not interested in design? I think not.

Even a short visit to their vast, permanent industrial exhibition, housed in ridiculously pretentious pre-war pavilions, reveals in their engineering industries a power and clarity that many of our western manufacturers might well study. The further you get away from consumer goods and the further from their foolish imitations of western clichés (as in their new two-tone motor cars or their speed-whiskered locomotives), the more impressive the commonsense of their designs. No country, for instance, has so great a need for heavy road trucks for transporting building materials and few have tackled the problem more honestly – there are no c cessions to art or fashion in these great Ru vehicles; no country makes more use of its river communications and few have developed so charac istic a vernacular in the design of river craft; country has channelled more effort into its scien and engineering equipment and few have achiev more straightforward standard – the general absen makers' nameplates and logotypes whether on dia chassis is a welcome relief; and no one would d the functional beauty of Russia's latest jet air When the Russians are solving new problems or peculiar to their own conditions their touch is sure.

Confident of catching up

But on the debit side, even in their most adva industries, the baleful influence of their archit taste intervenes again – in the lush interiors of t aircraft or in the classical dickies surrounding t atomic power stations. This perpetual contradic between the backward vision of their artists and a tects and the forward vision of their scientists

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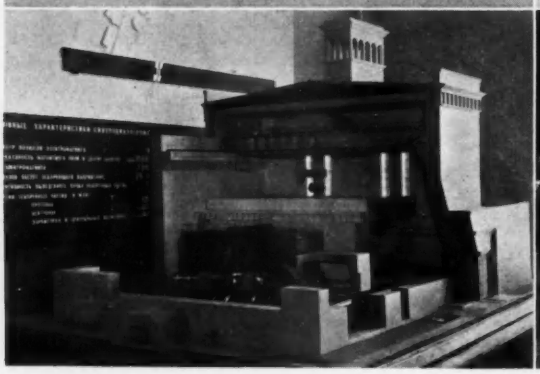

12 A cover and inside page of a new Russian consumer goods magazine called 'New Wares', published by the Ministry of Culture of the USSR. Typographically it is no better or worse than many British mail order catalogues, and the standard of goods illustrated is also much the same.

13 Model of a 680 million electron volts cyclotron in the 'Atomic Energy for Peace' pavilion. Note the archaic architectural treatment planned for so modern an assembly.

14 The new 'Volga M21' family motor car selling at around £1,000 (depending on the rate of exchange adopted) seems to be a fairly faithful adaptation of recent Western conventions, even to the two-tone colouring currently being introduced.

15 This typical Russian lorry, like the more powerful tip-truck shown on page 27, offers no concessions to art or styling. The muted colouring of Russian lorries can give the unwary the impression that they are all on military service.

16 An experimental Moscow tram of recent date, silent in running and clean in shape, with the tendency to chromium streamlining kept fairly well under control.

gineers is one of the recurring enigmas of the Soviet rld. And, on another plane, the same Socialist- alist pretensions even bedevil their ancient and mirable handicrafts – lacquered boxes, mammoth k carving, Oriental rugs are all being brought into e, no doubt with the best of intentions for the ussians spend much time and money on keeping ir old crafts alive.

But observation is not the only method of judging ussian interest in design. Conversations can be as vealing, and from many that I had I am convinced at the interest is there, whether among the scientific chnocrats or the humbler factory managers, an terest moreover that is coupled with the most engag- g modesty, as if they are aware of current short- mings, eager to learn and confident of catching up. I me away with the impression that nothing but good uld come from establishing exchanges between our signers and theirs (they have as yet no exact equiva- nt for an industrial designer) and, in due course, from ciprocal displays of consumer goods, for, like us, the ussians are gluttons for exhibitions.

17
18

17 A typical 'Peoples' Baroque' pavilion formerly part of the permanent agricultural exhibition, now housing a display of machine tools.

18 The author talking in the automotive pavilion of the 'Industrial Exhibition' with staff members of the State Scientific and Technical Committee of the Council of Ministers of the USSR.

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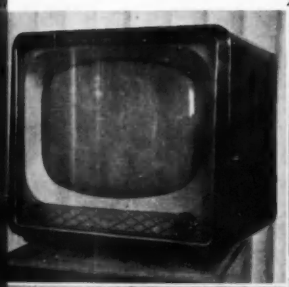
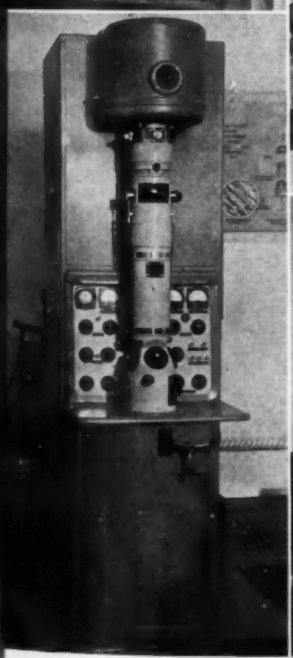
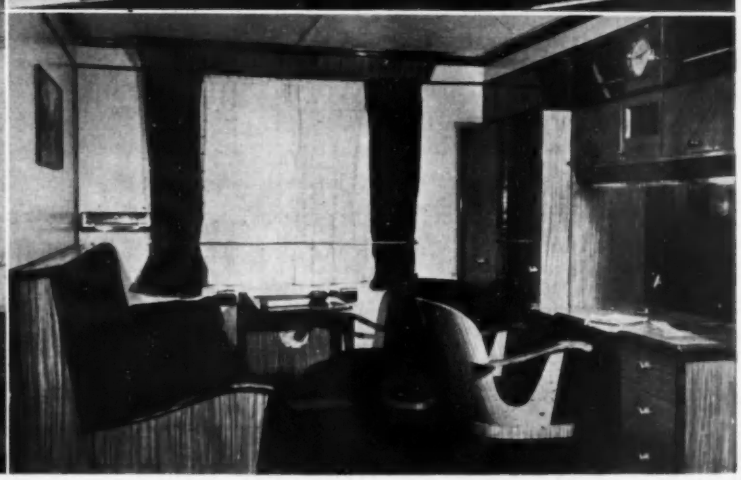






19 Russian domestic television sets seem to fall half way between the more modest end of the British industry and the excesses of the German school of 'Gelsenkirchener Barock'.

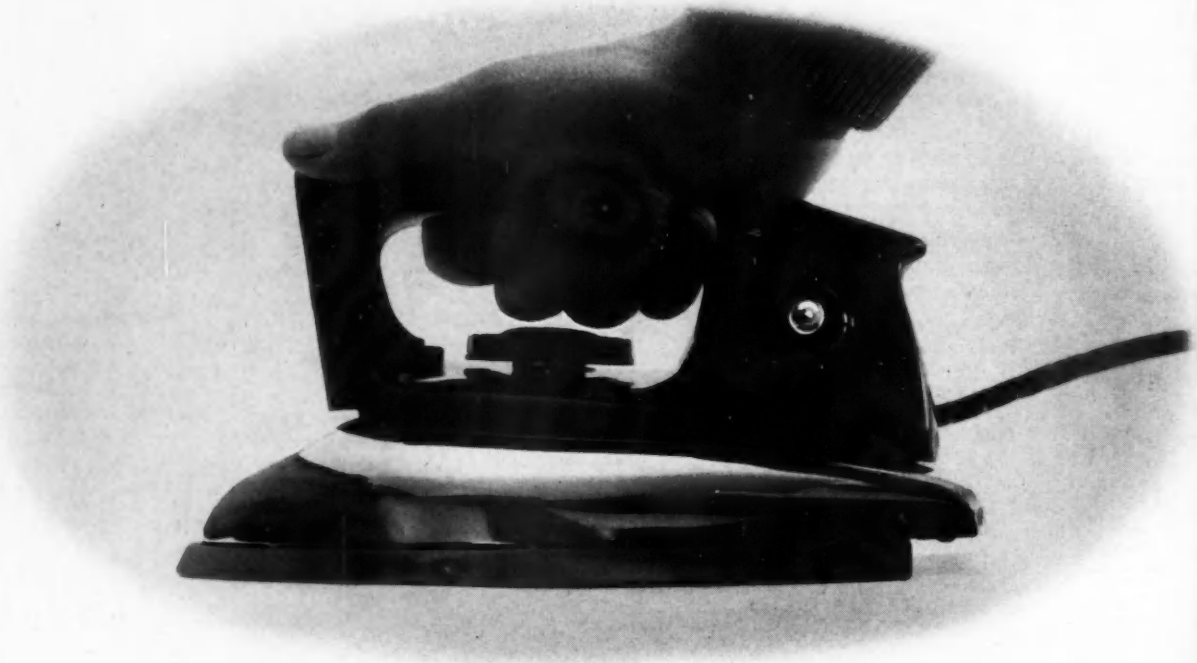
20 This electronic microscope is typical of the straightforward Russian handling of technical equipment, not yet industrially designed but not over-styled either.

21 Exhibition model of the recently launched 44,000 HP atomic-powered ice-breaker.

22 A mock-up of a middle-ranking officer's cabin on the atomic-powered icebreaker. All cabins are fitted with alternative bunks, one set fore and aft, the other athwart-ships, for use according to the roll or pitch of the vessel. Much thought is given to compactness and accessibility of the fittings, but the finish recalls the cheaper end of our furnishing trade, particularly the high gloss on the quartered veneers.

IRONING

an enquiry into the efficiency of current appliances



CONSUMER NEEDS 10

During the course of last year the series of articles in DESIGN on consumer needs drew attention to the importance of independent testing of products as a guide to the prospective purchaser. At the same time the series on design analysis, which also continues this year, has attempted to establish a method of assessing the qualities of individual new designs. In particular the article on the general purpose axe (DESIGN August 1957 pages 20–25) set out the type of research into human and technical requirements that is becoming increasingly necessary as the *starting point* in the design of a new product. The following article is a culmination of these developments in design criticism, combining and extending the two approaches in a study of domestic electric irons. Mr Archer analyses the basic principles and goes on to discuss the comparative merits of 10 British made irons. These irons were subjected to practical ironing tests by a panel of 12 housewives and were subsequently dismantled for laboratory examination. The remarks in the captions are based on a summary of the panel's comments as well as on the author's own investigations. (This aspect of the work sets out the type of evaluation of consumer products, recently suggested in DESIGN, and now being carried out by the British Standards Institution Consumer Council and by the Association for Consumer Research Ltd. The CoID welcomes co-operation with both these organisations.)

The author concludes that all the irons tested to a greater or lesser extent fall short of ideal requirements and that fundamental research would result in considerable improvements. Manufacturers investing in such research could gain a lead which exaggerated styling of handles and controls can never achieve.

THE DOMESTIC ELECTRIC IRON has such a characteristic shape and is so familiar to every member of every household that it is difficult to discuss it without the intrusion of preconceived notions based more upon sentiment than upon fact. No doubt designers and manufacturers of electric irons, being also human, experience the same difficulty. Indeed, one gains the impression that the design effort of the typical manufacturer consists of purchasing and dismantling the product of an admired competitor, and then trying to do the same only better – or cheaper.

Nevertheless, there is much to be gained by examining the subject from first principles. The function of a domestic iron is to eliminate unwanted creases from a variety of fabrics, or to press wanted creases into them. The iron is thus a moulding device, and an analysis of its design should begin with an examination of the plastic forming characteristics of the natural and synthetic fibres used in domestic textiles.

All textile fibres are elastic. That is to say, after having been bent, stretched, or deformed in some other way, they tend to return to their original shape, some more effectively than others. Almost all fibres are capable of being rendered temporarily plastic – which is the opposite of elastic – by physical or chemical means. If fibres are moulded into particular shapes while temporarily plastic and then restored to their normal elastic condition, the new shapes will thereafter survive distortion in varying degrees according to the nature of the fibre. This is the basis of permanent pleating and crease-resisting finishes.

Fundamentally the physical method of achieving plasticity is to agitate the molecules of the fibres so fiercely that the lattice structure of the intermolecular bonds is shaken up sufficiently for it to fall into a new pattern, yet not so severely that the lattice breaks down altogether, which would cause the fibres to become liquid. The most obvious way of agitating the molecules of any substance in this context is to apply heat. Heating is not the only way, however. Ultra-sonic vibrations, oscillating magnetic fields and alternating electric currents can also have the effect of agitating the molecules of certain materials sufficiently to make them plastic or liquid. Some research has been carried out into the use of these methods, but manufacturers rely on the heating method.

Heat control essential

The correct temperatures for heat-forming textile fibres are often critical, especially with some of the newer man made fibres, because the margin between plasticising and melting or scorching is sometimes quite small. If the iron is too cool the unwanted creases will recover elastically after a few minutes. If it is too hot the fabric may shrivel, scorch, or stick to the soleplate. However inexpensive it might be, an electric iron without heat control cannot be considered a good buy for any but the housewife whose laundry consists only of cotton and linen.

Heat-controlled irons are equipped with thermostats which cut off the current at the point indicated by the setting dial and re-connect it whenever the temperature falls more than a certain number of degrees below. At the lower temperatures required for ironing the man made fibres such as acetate, nylon and 'Terylene', the magnitude of the differential between the thermostat cut-out and cut-in temperatures becomes significant. For electrical and mechanical reasons the thermostat cannot be arranged to re-connect the current at a temperature which is close to that at which the current was cut off. Some domestic irons at present on sale are equipped with thermostats which cannot be relied upon to operate within the limits of 50°F which is recognised as the maximum variation permissible for domestic purposes.

Many irons are also provided with setting dials which give the wrong temperatures for some of the fabrics indicated. This applies particularly to viscose rayon, which is best ironed at a temperature close to that of silk or wool. Acetate rayon is best ironed at the lower temperatures used for the synthetic materials. The mark 'rayon' on many irons really means acetate rayon and gives poor results when viscose rayon is being ironed.

The Textile Institute has recommended that what were previously known as 'acetate rayon' and 'viscose rayon' should now be called 'acetate' and 'rayon' respectively. This is confirmed in the new British Standard on the description of woven and warp knitted fabrics containing man made fibres (BS 2935:1957). Bearing this in mind setting dials ideally might be marked as in the table, RIGHT, though it must be admitted that the wide variety of textile fibres necessitates some degree of over simplification.

Whatever the markings, users would be well advised to experiment with the thermostat to discover the best setting for each material.

Switch off at the iron

It is as rare to find an American iron without an 'off' position at the thermostat as it is to find a British iron with one. This feature provides a safety factor which, if universally adopted, would prevent hundreds of accidents in the home every year. Many British irons, but few American ones, are equipped with a pilot lamp which glows when the element is connected and goes out when the current is cut off. This is an effective means of indicating that the iron has been properly connected and also shows when it has reached its operating temperature. At the end of the ironing task, however, if the iron is left idling the pilot is almost certain to be 'off' a great deal more than it is 'on'. It is likely, therefore, to mislead the user into assuming that the iron is disconnected when in fact it is not. A defective pilot lamp can have the same effect. Since many women can never remember whether the switch at the wall should be up or down to be 'off', fires and burns can result.

The soleplate of the typical domestic iron is both the means of applying heat to the fabric, and the former against which the fabric is moulded. The ironing board or pad is merely a means for holding the fabric against

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Mark	*Temperature*
Off	
Synthetics	300°F
Silk	325°F
Rayon	350°F
Wool	375°F
Cotton	425°F
Linen	475°F

This table is based on recommendations of Consumers' Research Inc and Consumers Union of U S Inc, U S A, British Man-Made Fibres Federation and British Rayon Research Association.

IRONING

the mould. The typical boat shaped soleplate of the domestic iron is quite convenient and unlikely to be abandoned for some years, though it is by no means the only practicable shape.

Several manufacturers have attempted to break away from the heel-rest feature, which is a discomfiting restriction on the designer. Most of these attempts have involved the provision of a separate stand, but this may be easily mislaid and is sometimes an embarrassment when the iron is to be stowed away while still hot.

The nose of the soleplate is likely to receive criticis
if it is either so sharp as to be in danger of enterin
button holes, etc, and tearing the garment, or if i
is so blunt as to be clumsy in dealing with gathere
seams.

The general shape of the soleplate, the slope of th
sides and the provision of features such as butt
grooves have only marginal value from the function
point of view, but greatly influence the effectiveness
the general appearance and sales appeal of the produc

The 10 heat-controlled irons illustrated and discussed here and on page 36 have been chosen from 'Design Review' and as such are among the best of British designs on the market. The captions are based on comments by a panel of 12 housewives all of whom used each of the irons illustrated over a period of one to two weeks. Some confirmatory bench tests were also conducted. For example, the distribution of heat over the soleplate was examined by placing the irons on similar pieces of water-soaked blotting paper, after which the irons were switched on. At intervals the irons were removed and the drying out patterns were recorded. Thermostat settings were tried out with samples of various textile materials.

1 Morphy-Richards 'Autocontrol'
630–750 watts. 4½ lb. Advertised weight 4½ lb. This is the well known pre-war design. The handle is still one of the most comfortable. The pilot is well placed, easy to replace, but does not comply with the British Standard's safety requirements (BS 1732)*. The thermostat control is small and fiddly: has no 'off' position. There is no skirt protection from burns and the user may possibly fear electric shock through contact with the exposed metal cover. Rather a slow insensitive iron, by the best current standards. Herringbone element. Polished steel soleplate. Not marked BS 1732. £2 8s 1d.

2 Revo 'Automatic'
650 watts. 4 lb. Advertised weight 4½ lb. A pedestrian desig
dominated by a massive rear pillar. A fairly comfortable handl
Pilot lamp is safe, but not easy to see. The button-like thermos
knob is easy to read, but has no 'off' position and there is no pro
tection from the exposed metal cover. Conventional constructio
with herringbone element and polished steel soleplate. Moderate
stable heel. Unfortunately this sample failed to heat up, an
practical tests could not be run. Not marked BS 1732. £2 7s 10
(*enamel*); £2 17s 11d (*porcelain*); £2 12s 7d (*chrome*).

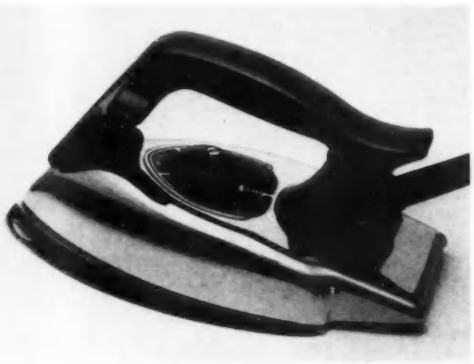
5 GEC Model D5851
750 watts. 2⅞ lb. No specific weight advertised. Elegant appearance but with vestigial thumb-piece, which is uncomfortable in use. Pilot lamp interchangeable with lead. Pilot replacement easy and safe. Thermostat knob is obtrusive, has no 'off' position, but is clearly marked. All-over handle skirt gives good protection from the metal cover. A good, sensitive iron with cast-in element, very well constructed except for inaccessible screws for cover removal. Polished aluminium soleplate. Fairly cool substantial heel-rest. Conforms with BS 1732. £2 8s (*cream*); £2 15s (*chrome*).

6 Premier 'Super-Smoothwell'
750 watts. 4½ lb. Advertised weight 5 lb. A pleasant looking iron
with a comfortable hand grip, although the thumb rest is rather
bulky. Pilot lamp safe, but not easy to see or replace. Thermostat
knob and marking are easy to use but crude in appearance. No
'off' position. The aluminium skirt remains cool. A fairly fast and
reasonably sensitive iron with herringbone element, and polished
steel soleplate. A cool and substantial heel-rest. Not marked
BS 1732. £2 14s 11d.

*'Domestic Electric Irons, BS 1732:1951.' Since the preparation of this article a new British Standard for 'Domestic Electric Steam Irons' has been published – BS 1732 part II:1958.

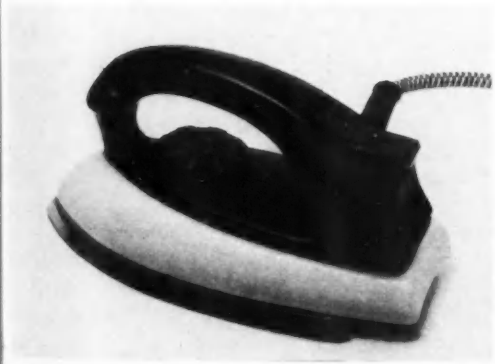
Most users seem to be contented with a soleplate area of about 28 sq inches.

The surface finish and the material from which the soleplate is made have a direct bearing on the rate and evenness of the transfer of heat from the iron to the fabric. A highly polished finish is easy to keep clean and slides freely over the fabric, but a matt finish has a substantially greater capacity for heat transfer and many manufacturers are going over to matt finishes. Similarly, although stainless steel is the most durable material for soleplates, it has a very poor coefficient of heat transmission, and therefore aluminium alloys are much used for this purpose. Aluminium soleplates may or may not be chromium-plated, and they may be either polished or matt. A soleplate with poor thermal transmission characteristics, such as polished stainless steel, is likely to give rise to one or more of three undesirable conditions: the distribution of heat over the soleplate may be uneven, producing patchy work; the rate of transfer of heat, especially to damp cotton

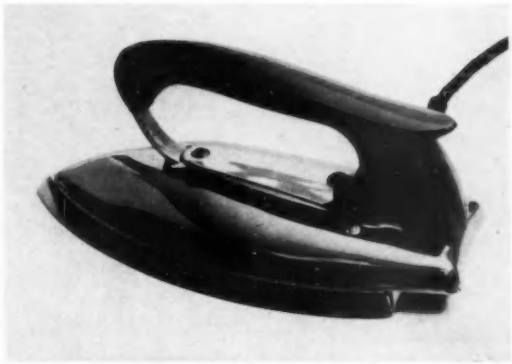


3 Hotpoint 'Plus five'
800 watts. 5½ lb. Advertised weight 6 lb. An over-styled design. The handle is fairly comfortable, but gives a centre of pressure which is too far from the point of the iron. The thermostat knob and markings are crude and the user's hand is unprotected from the bare metal cover. No 'off' position. A slow and insensitive iron with herringbone element and polished steel soleplate. Conforms with BS 1732. £3 19*s* 3*d*.

4 Morphy-Richards 'Atlantic'
630–750 watts. 2¼ lb. Advertised weight 2¾ lb. There is also a 4¼ lb model which was not tested. A highly styled design with a dated bullet nose. The handle is fairly comfortable. The very prominent pilot is safe and interchangeable with the lead. The thermostat knob is well detailed, easy-to-read, protected by the all-over handle skirt, but has no 'off' position. The light weight model is a good, fast sensitive iron, very well constructed with an element cast into the matt aluminium soleplate. A cool and stable heel-rest. Not marked BS 1732. £2 8*s* 1*d* (*enamel*); £2 14*s* 9*d* (*chrome*).



7 HMV 'Milady's Iron'
745 watts. 4¼ lb. Advertised weight 4 lb. Rather arch styling with cock's-comb tailpiece. The handle is too thick and the thumb-pieces too prominent for a comfortable grip. Pilot lamp safe, interchangeable with lead, but fiddling to replace. Thermostat knob clearly marked but unpleasant to look at. No 'off' position. Misleading use of term 'Crepe', which could in fact be made from a variety of different fibres. All-over handle skirt gives good protection for the hand. A rather slow and insensitive iron with herringbone element and polished steel soleplate. A cool and fairly stable heel-rest. Conforms with BS 1732. £2 8*s* 6*d*.



8 Hawkins 'Universal'
800 watts. 4¼ lb. Advertised weight 4¼ lb. In many respects this comes closer to the functional requirements than most, but in appearance some of the detailing is weak. The handle is comfortable, and the thumb rest is very nearly in the right place. The thermostat knob is well integrated into the slim rear column. It is clearly marked, and has an 'off' position. There is no protection from the bare metal cover. A reasonably fast and sensitive iron, with herringbone element and polished steel soleplate. A cool, but not too stable heel. Not marked BS 1732. £3 0*s* 4*d*.

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9 Hoover 'Steam or Dry Iron'
1,000 watts. 3¼ lb. Advertised weight 3¼ lb. Drip type. Rather heavy and unexciting in appearance. The handle is fairly comfortable. The thermostat knob, though very clear, efficient and easy to use, was unattractive to most users in the tests because of the very heavy serrations. There is an 'off' position. Excellent protection for hands. A fast and sensitive iron, with element cast into matt aluminium soleplate. Easy dismantling for periodic removal of hard water deposits. Very stable, cool heel. Altogether the best engineered and functionally most efficient iron of those tested, though also the most expensive. Not marked BS 1732. £4 15*s*.

10 Morphy-Richards 'Steam Iron'
750 watts. 3 lb. Advertised weight 3¼ lb. Kettle type. Attractive in appearance with a fairly comfortable handle. The prominent pilot is safe and interchangeable with lead. The thermostat knob is unobtrusive but the plate with thermostat markings is below the usual Morphy-Richards standard. No 'off' position. Good protection for fingers. A fairly fast but not very sensitive iron. Element cast into matt aluminium soleplate. Filling is easy but emptying difficult. A stable and cool heel-rest. Not marked BS 1732. £3 19*s* 1*d*.

and linen, may be insufficient to maintain the requi temperature for heavy and sustained work; the te perature of the top surface of the soleplate, where t thermostat's temperature sensing device is situat may not correspond with the temperature of the bott surface of the soleplate, which is doing the work, th permitting wide fluctuations between effective a indicated cut-in and cut-out temperatures.

Cast-in elements

Until recently, all the heating elements for electric ir were of the herringbone mica-insulated type. Th type of element has to be firmly clamped against t soleplate by means of a pressure plate, and the efficien and life of the element are largely dependent upon t uniformity of the clamping pressure. It remai vulnerable to shock, vibration, and the penetration moisture. A more modern method is to use a ceram insulated element cast into the soleplate itself. Cast- elements, if skilfully designed, can produce much mo uniformly distributed heat and are inherently le vulnerable. In addition, the firmly cast-in termin from the element facilitate the provision of safer, mo rigid, and better engineered construction for t electrical interconnections.

Few British manufacturers are using the cast- element. Fewer still are producing irons which co form to British Standard 1732:1951, which sets o recommended minimum standards of safety, durabili and methods of test. In fact, only three of the sampl examined for the purposes of this analysis conform with the standard completely. One condition of co formity is that the iron should be marked BS 1732. is a pity that consumers, consumer organisations, a trade buyers do not put pressure on the manufacture by refusing to accept irons which do not bear th number, BS 1732.

Negligible effect of weight

Among housewives there is much difference of opini on the relative merits of light and heavy irons. The fa seem to be these: the application of pressure plays a pa in the plastic moulding of fibres, but the role is a subs diary one, and the contribution of different weights o iron to different total applied pressures is relatively sma

The pressure applied by the weight of a light iron i say, two and a half pounds, is in the order of one-ten of one pound per sq inch, and the pressure produced b a heavy iron at, say, six pounds, is in the order o one-fifth of one pound per sq inch. The average ad ditional pressure produced by the hands of the oper tors who took part in the tests varied from moment t moment between one-tenth of a pound per sq inch an one pound per sq inch. The most that a well-bui woman could exert would be about seven and a ha pounds per sq inch. When a seam or a fold passes und the iron the pressure on the seam may be 25 times t great – that is to say, anywhere between two and a ha and 200 pounds per sq inch. Under these circum stances the effective difference between a light weig and a heavy weight domestic model is negligible an

since a fair amount of energy is expended in picking up and putting down the iron, the housewife would do best with a light weight model.

Much more important than pressure is the presence of moisture. Just as increased pressure improves the *rate* of heat transfer and reduces the time required, so increased moisture improves the *effect* of heat transfer and reduces the temperature required. It also helps to spread the heat uniformly, both across the surface and into the texture of the fabric.

Most fibres are capable of taking up a certain amount of water, some of them into the molecular structure. Such fibres are generally more pliable in this state, and if they can be held in shape while the water is driven off, that shape will be more or less permanently set. There is evidence that in some cases, at least, the passage of the water out of the fibre contributes directly to the molecular agitation referred to at the beginning of this article.

As a rule, the best effects are obtained when the fibres contain as much water as they are able to absorb, and are ironed until completely dry. Free water *between* the fibres serves no useful purpose and robs the iron of heat which could be better employed. Each type of fibre has its own characteristic moisture absorbing capacity. For example, cotton takes up a lot of water and should be ironed well damped, while nylon takes up extremely little and should be ironed almost dry.

Two kinds of steam iron

New types of fabric have made moisture control more necessary, and new ways of drying the washing have made moisture control more difficult. The introduction of the steam iron has made damping down and wet-cloth pressing unnecessary.

There are two types of steam iron. In the kettle type, the water boils in a container which stands on the element and the steam passes through a tube – whose entrance is high above the water level – to vents in the soleplate. In the drip type of steam iron the water drips from an isolated tank within the body of the iron into a recess in the top of the soleplate, where it flashes into steam and passes through vents to the underside. The drip type starts to steam more quickly than the kettle type and stops steaming when the iron is stood on its heel. It is also capable of being switched instantly to dry ironing by means of a plunger which closes the drip orifice. Since the best results are obtained when fabrics are ironed until completely dry, it is desirable that the steam should be switched off and the iron used as a dry iron for the finishing passes.

The kettle iron must be emptied of water if it is to be used as a dry iron. In the drip type of iron, water is less likely to reach the fabric than it is in the kettle type, and since the water in the container is not boiling there is less chance of careless handling causing a scald.

On the other hand, the kettle type is often easier to fill and usually less liable to be affected by progressive furring up of the vent passages in hard water districts. Nevertheless, Consumers Union in the USA stated in its most recent report on irons, published in August 1955, that it could not generally recommend the purchase of kettle irons because of the faults inherent in them.

The ordinary consumer expects – and is entitled to expect – that the products offered to her are functionally efficient and operationally safe. It is the shape of the handle which tends to sell the iron, since most prospective purchasers, having inspected visually the models offered, select two or three and try them out with a few strokes of mock ironing. However, careful observation reveals that the grasp which most customers take on an iron in the shop is a high wrist action with thumb extended on the thumb rest provided, while all the operators who were the subject of observation in this series of tests used the iron in their own homes with a low wrist action, the thumb lying either under the handle or, if the thumb rest was so prominent as to make this uncomfortable, across the top of the handle. Front end pressure is sometimes required and is best applied with the thumb, but to be effective this must be centrally positioned. It would appear that the thumb rest is a survival from the days of the turned wood handle, when the button-like thumb piece served as a guard against burning the hand on the hot metal uprights. Thumb pieces are such universal and eye-catching features that many people misguidedly set much store by their prominence. In their half-hearted attempts at ergonomic design, manufacturers have created a rod for their own backs.

The accessibility, clarity, and style of the thermostat control knob and the position of the pilot lamp, if fitted, play secondary but important parts at the point-of-sale. The screening of the periphery of the control knob from hot metal surfaces is often overlooked by manufacturers, as well as by consumers. One of the difficulties which manufacturers encounter in the design of these features is the state of uniformity which the market has now reached. In order to be different, but still acceptable, designers sometimes feel themselves forced to adopt details less than ideal operationally.

Fundamental advances

Progress would be accelerated if enlightened consumers, and consumer organisations, were to be vigilant in their support of manufacturers who adopted the best practices, especially in the things which the ordinary housewife is least likely to notice: accurate heat control, an 'off' switch at the iron, and adherence to BS 1732.

Apart from these details excellent opportunities now exist for fundamental advances in the design of irons. Genuine research into the physics of ironing, and real ergonomic design of the handle and thermostat knob based upon work study, are likely to produce a dynamic new form which would have more sales appeal than any further attempts at re-styling. Since it would take most firms the best part of two years to make any impact with an adequate but visibly different copy, the progressive manufacturer who is first to invest in such research would establish a substantial lead over his competitors. Final success however would depend on public understanding which, in turn, would depend on intelligently handled publicity.

Acknowledgements

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Consumers' Research Inc, USA
Consumers Union of US Inc, USA
British Standards Institution
Electrical Association for Women
The British Electrical Development Association
British Man-Made Fibres Federation
British Rayon Research Association
The British Cotton Industry Research Association
British Launderers Research Association.

Thanks are also due to William Johnstone, principal of the LCC Central School of Arts and Crafts, for the provision of laboratory facilities and, through him, to Paul J. Collins, post-advanced student of industrial design at the Central School of Arts and Crafts, for access to unpublished research material on domestic electric irons.

Background to furnishings

A SMALL TOWN on the outskirts of Greater London is not perhaps the most likely place to find a progressive attitude towards furniture design, but Dunn's of Bromley has been recognised for a number of years as one of the leading retailers of well designed furniture and furnishings in the country.

Recently the firm opened, in the Market Square, its new shop designed by Bertram Carter, which is the successor to a long line of premises which have stood on the same site since the firm's foundation in 1710. In 1941 Dunn's shop, which was then an essay in 'stock-broker's tudor', was destroyed by bombing and was replaced by a temporary building, converted from a second hand furniture store (DESIGN, October 1953 pages 22–6).

'Contemporary' design of a certain kind has become big business, particularly in the furniture field, but the new shop of Dunn's is notable for its avoidance of the now well-thumbed commercial clichés and shop fitting gimmicks. One of the interesting features of the new building is that it incorporates the temporary shop virtually intact, which now houses the soft furnishings and china departments. The new building does not occupy a large site yet the treatment of the interior conveys the opposite of this, and the spaces are utilised in such a way that the furniture is displayed to the best advantage, creating an overall impression which is a long way from the calculated confusion common in many furniture stores.

▲ A general view across the second floor. The furniture is arranged in groups to suggest room settings.

A view from the second floor looking at the junction of the old and new buildings. On the right can be seen a part of the roof of the earlier premises, now used as a display space for chairs. The use of this old exterior wall together with the exposed joists and columns brings architectural 'Brutalism' to the retail trade. ▼

▲ The main entrance showing the glass corridor which leads from the street into the shop, extending the range for window-shoppers, and breaking down the conventional barrier of the shop doorway.

Photographs by Sam Lambert

curtain wall panels

Industrially designed buildings 2

The sudden eruption into prominence of curtain walls over the past 25 years is being followed by some decline in popularity among avant garde *architects. We believe that this is partly due to the lack of variety among factory made infilling panels which do not echo the rich inventiveness in pattern and texture achieved by British designers in related industries.*

FOR THE READER who is unfamiliar with this field certain terms need explaining. Curtain walls and light claddings are often spoken of as if they were much the same thing, and sometimes as if they were as different as glass and brick. Light weight claddings were the forebears of curtain walls and now exist alongside them. They consist basically of window and panel constructions which are used in relatively small assemblies and fixed directly to the main structure of a building. The curtain wall uses many of the same types of components – especially the panel-fillings and it is a kind of sub-species of light weight cladding; but it is distinctive in having its own light weight sub-frame, so that it becomes virtually a curtain or skin outside the main structure.

The sub-frame is a distinction in another sense, for it is this which has made the curtain wall characteristically a factory product. It is easy enough for an architect to fit panel claddings to a structure as ordinary builder's work, but the sub-frame of a curtain wall is itself a rather special item and must be factory made. It has to receive windows and panels of various kinds, to keep out the weather, and to allow for various mechanical and thermal stresses that build-up on the face of a building. The result is that a manufacturer must think of his frame, windows, doors and panels all together as a system of which he will make most, if not all of the parts. Interchangeability of panels has been the chief flexibility occurring outside any given system.

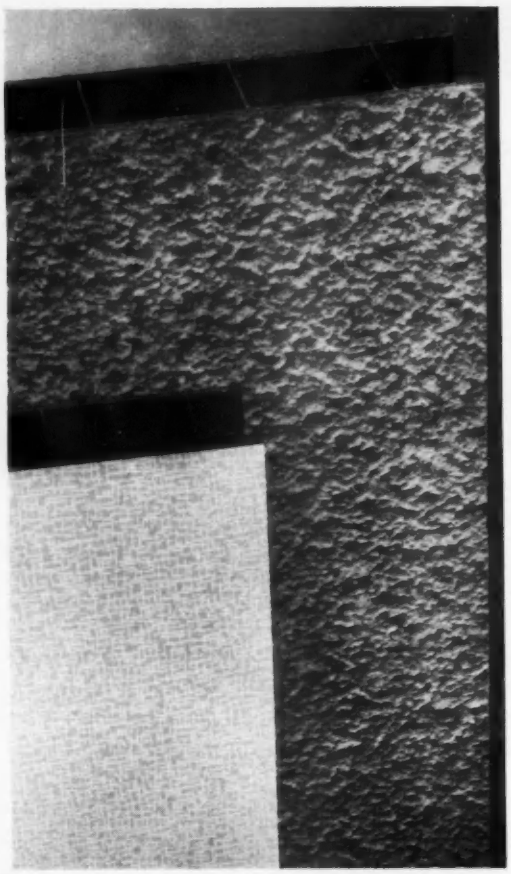
Architectural characteristics

Characteristically a curtain wall is thin and looks it. Colour and pattern then come to it easily and a slight texture has been achieved in some cases. However, modelling in depth is more of a problem, and a sense of richness of this sort has largely defeated designers up to the present time.

Colour and pattern are of course sometimes sufficient in the hands of an architect with sure judgment. A few buildings – just a few – show this to be true, and one is reminded of a Mondrian or a Nicholson in certain examples. There is a deceptively elemental simplicity of appearance in a system which consists basically of lines demarcating panels or openings, and it can and often does descend into an arid commonplace or worse. Such a system can only attain the quality of architecture by an eye and hand which know where beauty and

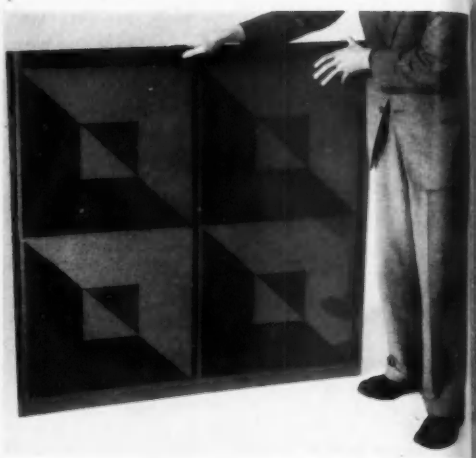
continued on page 42

Curtain wall panels

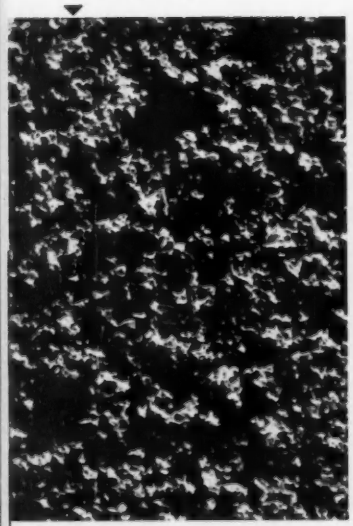


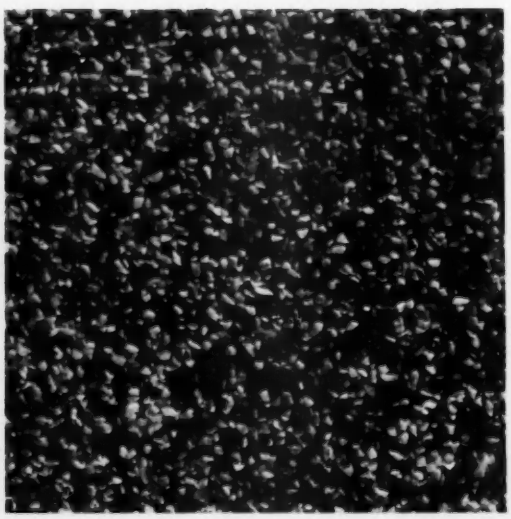
'Holoplast 90' infill panels in pheno formaldehyde faced w melamine. Plastics offer a variety of decorative treatments building panels, although in these two examples the scale of patterns is too small and too fine in detail to be seen as anyth but a solid tone. MAKER *Holoplast Ltd.*

A decorative panel in 'Armourclad' glass. The decoration applied in ceramic pigments which are fused on to toughe plate or rough-cast glass. 'Armourclad' is not produced i standard range of patterns but made up to architects' or clie particular designs. DESIGNER *Peggy Angus.* MAKER *Pilkin Brothers Ltd.*



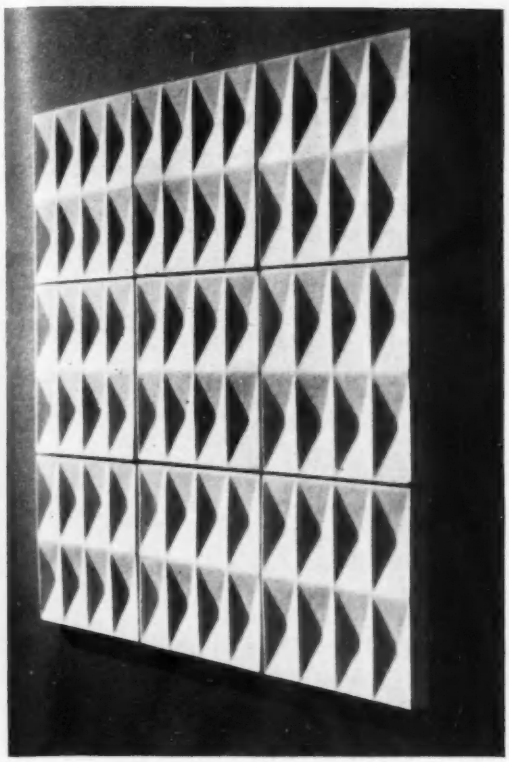
A section of a 'Pyrok' rendered panel, reproduced actual size. 'Pyrok' is a cementitious composition made from cement, exfoliated vermiculite, lime plasticiser and water, together with a pigment if colour is desired. It can be sprayed on to practically any surface with finishes from rough-cast to smooth, but its value in this context is its rich surface texture. MAKER *Pyrok Ltd.*

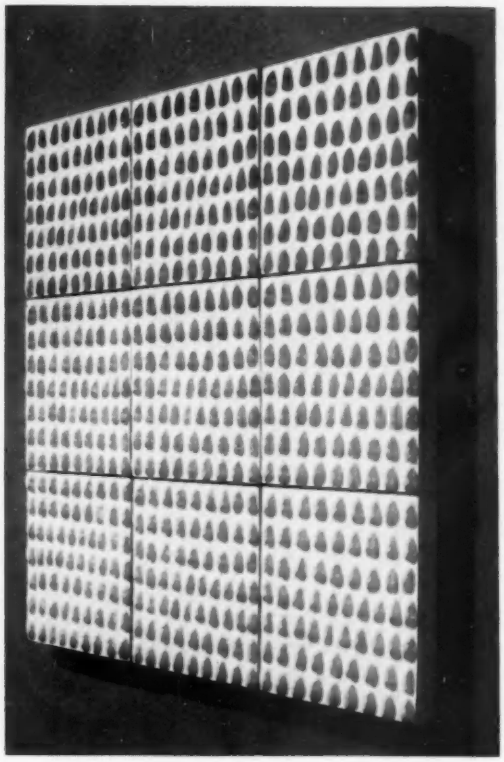




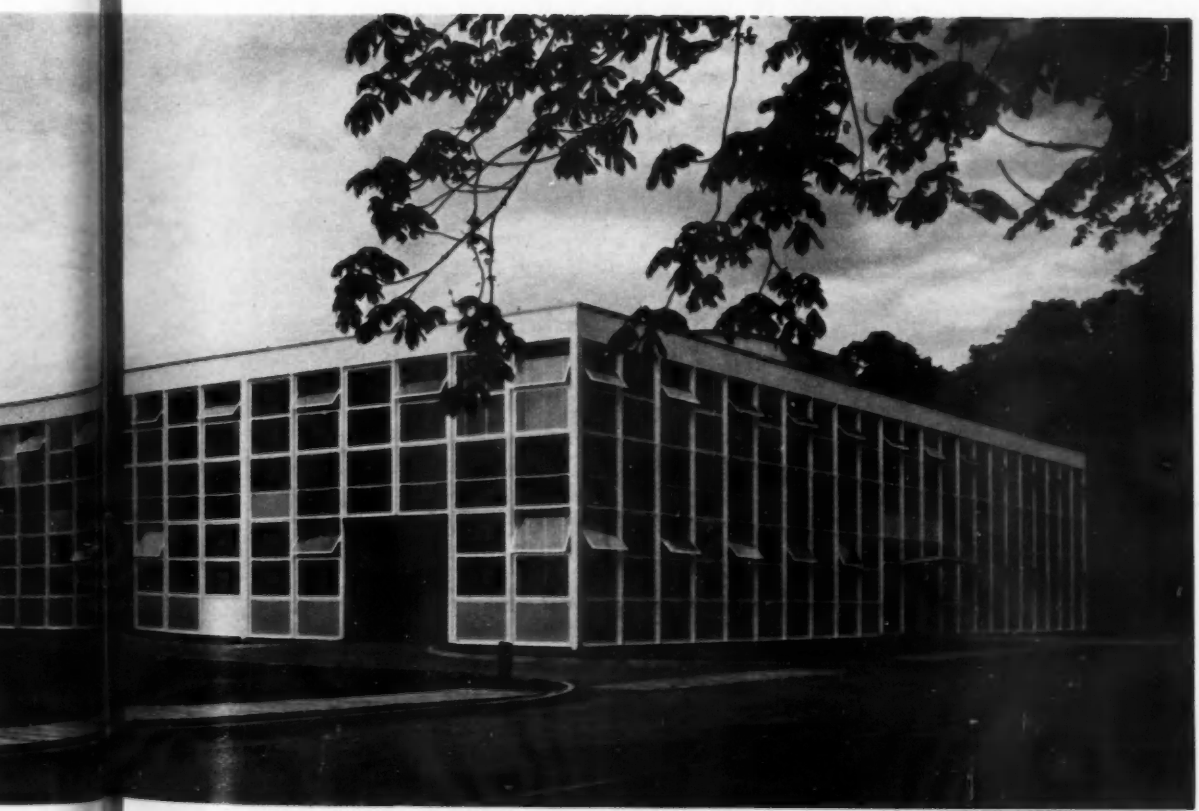
A section of a panel rendered in 'Glamorock', reproduced actual size. This rendering is a natural mineral aggregate obtainable in a number of colours or in mixtures of different combinations. The texture, together with the optical mixture of the colours, give a limited, but nevertheless subtle decorative quality. MAKER *Glamorock Ltd.*

'Escol' vitreous porcelain enamelled steel panels on the Pinehurst laboratories, Royal Aircraft Establishment, Farnborough. The illustration shows how a routine curtain wall can be made more decorative and more exciting with the imaginative use of single colour wall panels. ARCHITECT *S. G. Page.* MAKER *Stewart & Gray Ltd.*





Two examples from a range of relief tiles for exterior use. These tiles are not made specifically for curtain wall panels, although the manufacturer is experimenting in this direction. The subtle qualities of light and shade indicate what might be achieved with relief panels and how a façade could be enhanced by their intelligent use. DESIGNER *I. Kamlish of Carter's Design Unit.* MAKER *Carter and Co. Ltd.*



elegance lie in the shape, colour and flatness of a panel, and what part in the whole pattern a window will play, and what kind of a line to seek in the frame.

'Architecture by the square yard' is a concept that demands the highest qualities of industrial design; and perhaps particularly so as long as it offers only line, pattern and colour in its components. Even then it will have a limited range of expression, tending towards sophistication; an intellectual rather than a heart-warming aesthetic.

Modelling, texture and richness – these are the weak points of the curtain wall at its present level of development. Modelling and texture are again terms that can be confused, so let us understand modelling to be texture over the whole façade or shape of a building – recesses, protrusions, extensions of the building, and so on. Texture can then remain a term to be used for the surface quality of the components themselves.

Modelling is of course something that the architect himself can often manage readily enough in a building by mixing curtain wall and ordinary construction on the exterior. But there seems no doubt that the flatness of present curtain wall systems must give way to more flexibility in this respect, with minor projections and recesses made easier, panels and windows brought forward or dropped back, keeping the external construction consistent and at the same time achieving some form of modelling. There is a place for flatness, and there is also a place for the construction that makes possible a stronger play of light and shade.

Opportunities with panels

Probably this will mean that manufacturers will have to organise themselves to cater for a certain proportion of systematised purpose-made parts within systems that are otherwise largely standardised. And they will have to be able to make components such as canopies, balcony fronts and other major items when consistency of design and construction call for similarity of material and character. The manufacturer who enters this field should understand the architectural context in which he has decided to work, for the offering of such a significant architectural item as a whole wall system imposes, in a sense, a responsibility to meet reasonable demands for the other elements of a façade.

Texture and richness – these will have to be developed mainly on the panels themselves, and here an infinity of opportunity exists for inventiveness, charm, warmth and light, about which we have as yet done scarcely anything. It is an architectural and industrial blind spot. Many British wallpapers, tiles and fabrics are imaginatively designed but scarcely an echo is to be discerned yet in the curtain walls of British buildings.

For 25 years or more the Americans have been using figured spandrel panels of pressed or cast metal in huge numbers on skyscrapers, although the detail has generally been of poor quality. Since the war the Italians have manufactured some very fine panels for curtain walls, chiefly in anodised aluminium, and they have also produced mosaics and other exterior finishes of great beauty and variety for buildings, some of which we import. In the field of clay products British manufacturers are now beginning to turn out some most promising designs in forms other than bricks. However, this problem of the curtain panel is an almost unexplored field of great opportunity, basically well suited to British industry, and it calls urgently for development.

Perhaps some possible forms for new panels might be a combinations of existing types. For instance, the Americans have scarcely used any colour with their impressed panels. Most of their colour panels are vitreous enamel and flat, formed as part of a 'sandwich' incorporating heat insulation. A combination of colour and embossed pattern ought to be promising, and so ought colour patterns alone, both formal and textural.

A new direction

The scale of these patterns matters a great deal, as always in building. Scale is important in respect of the façade as a whole, and comes from the overall design; but it is important also in far finer detail which provides interest at close quarters, and this is where one of the big weaknesses occurs today. The American type of spandrel with a simple geometric shape offers too little detail; something much finer and sharper is needed, if it is to be 'read' at all from close-quarters.

Metal, glass, plastics and asbestos are the main materials in use for curtain wall panels today. Some other possibilities exist, and there are combinations still to be explored. British architects and curtain wall manufacturers have with great enterprise developed the technique to its present level; now an effort in a new direction is needed to give it more versatility and richness.

These things are needed for British architecture, but surely also they have more possibilities than have yet been realised, especially as exports to Europe. On the Continent it is only in Germany that there is any comparable commercial development, and on the whole the emphasis there has been only on light claddings in panel form. It seems therefore that the Continent ought to offer good opportunities for markets, especially to the developer who can offer versatility, good technology, and the highest qualities of architectural design. These are the essentials for success in this kind of work at any time, but especially so at the moment. The design of curtain wall components cannot stand still; it must either move forward to provide fresh qualities in building design, or be replaced by other ways of building which can offer them.

'Design in Your Kitchen', an exhibition of kitchens and kitchen equipment, is to be held in The Design Centre from March 4 – April 12. The layout of the kitchens has been planned in accordance with principles put forward by the Council of Scientific Management in the Home, whose recommendations are discussed in this feature.
Standard equipment by British manufacturers has been used to furnish both kitchens, and their designers comment on the difficulty of producing well designed kitchens with the type of fittings that are at present available. Their complaints point to the need for closer co-operation between manufacturers, architects and designers, and the various organisations carrying out research in kitchen design. This is also stressed in the article on pages 46 – 47, in which a number of British kitchen equipment manufacturers comment on the extent to which American technical achievements will influence the development of kitchen design in this country.

Kitchens: co-ordination needed

THE IDEAL KITCHEN, in this country at least, is still more of an architect's and planner's dream than an achievable reality.

This is partly due to the rapidity of technical and social changes in recent years. Kitchen areas in the majority of homes were not designed to serve today's needs. Again kitchen planning is a relatively new science, and the various organisations working in this field are still to a certain extent pioneers. However, much valuable research in kitchen design and planning is being carried out in this country by such organisations as the British Standards Institution, the Building Research Station of the Department of Scientific and Industrial Research, and the Council of Scientific Management in the Home. ('Meals in Modern Homes', a booklet recently published by this organisation, gives its recommendations in detail.) Some of these recommendations are briefly summarised below, and these provide a set of basic principles to which the kitchen planner can work.

Layout The sink and the cooker should be close together, with work surfaces on either side: ie work surface, sink, work surface, cooker, work surface. This sequence should not be broken by a door or other traffic way. There should be storage space within arm's reach of this area. If the kitchen is large, and a variety of different activities take place in it (cooking, laundry, eating, etc), the equipment should be grouped in various work centres.

Heights for working surfaces At present the standard height for working surfaces in this country is 3 ft (BS 1195 : 1948). Many experts, however, believe that this is too high, and recommend a lower working level (about 2 ft 8 inches), especially for cooking operations. The Swedish National Institute for Consumer Information (formerly known as HFI) has recently carried out extensive research into ideal heights for working surfaces, and recommends: cleaning surfaces, 2ft 9½ inches – 2 ft 10¾ inches; food preparation, 2 ft 8¼ inches – 2 ft 10¼ inches; cooker hot plate, 2 ft 7½ inches – 2 ft 9½ inches.

Lighting The main working surfaces, cooker and sink should be well lit by both natural and artificial lighting.

Ventilation Adequate ventilation should be provided, either by extractor fans in the window, or by a ventilated canopy over the cooker.

Meals There should be easy access to the dining room from the kitchen, and if meals are served in the kitchen, the table should not interfere with the sequence of the working area.

The kitchens on show

The two kitchens illustrated on the following pages will be on show in The Design Centre from March 4 – April 12. They were designed by Jo Pattrick and Ursula Bowyer, in co-operation with the Council of Scientific Management in the Home. There will be a BBC television preview of the exhibition, which also includes two kitchen corners and a display of equipment, on the 'Mainly for Women' programme on March 3, and a number of retailers throughout the country are staging their own displays to coincide with that in The Design Centre.

Luxury kitchen

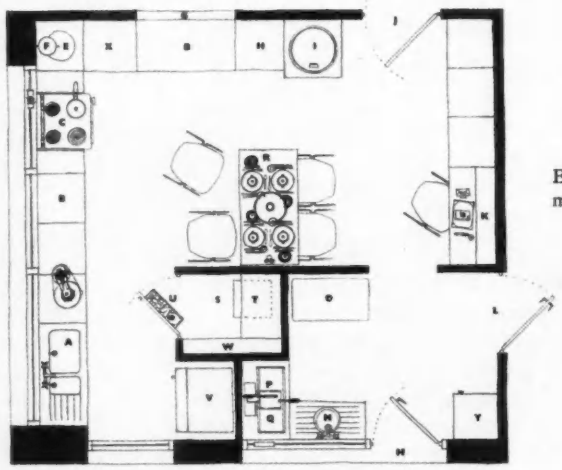
Ursula Bowyer was asked to design a luxury kitchen, using standard equipment by British manufacturers. No expense limit was set, and she has planned an all-electric kitchen for a family with plenty of money to spend. The kitchen is intended to be run by the housewife, however, and money is spent on equipment and labour-saving devices, rather than domestic help.

The kitchen is 16 × 16 ft, and the equipment is planned in this sequence: store, prepare, cook, serve, clear, wash up and put away. There is also a desk with a board behind it where the housewife can plan her meals, attend to orders and accounts, etc. Serving can be through the hatch into the dining room, or on to the kitchen table. A laundry area can be shut off from the rest by a sliding door.

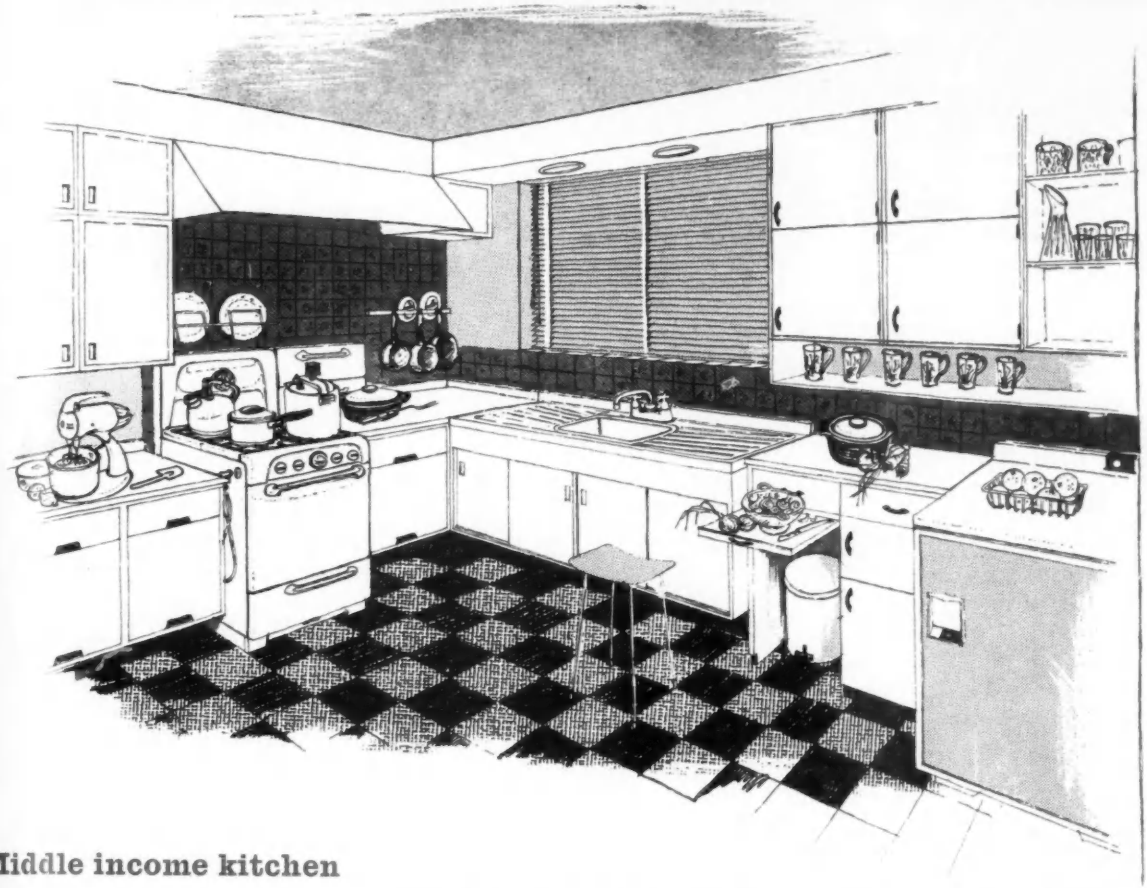
Mrs Bowyer reports that she found it very difficult to design a well equipped luxury kitchen using standard equipment. She found none of the ranges of cabinets with related equipment that are on the market was suitable for her purposes, and one of her main problems was to give the kitchen a built-in look using designs from different manufacturers. Standard dimensions of cookers, washing machines, refrigerators, etc, often vary slightly so that it is difficult to fit them in to a unified layout. Handles and knobs differ; she chose white equipment as colours are difficult to match, but even then found that no two whites were the same.

Again she would have preferred to use ovens designed to be built into the kitchen at waist height, with separate hot plates, as in American kitchens, but found nothing that exactly fitted her scheme available in this country. She felt that most electric cookers are not large enough for this type of kitchen, so that an electric toaster, frying pan, percolator, and a boiling water heater were necessary to provide greater flexibility.

A *Sink unit*
B *Working surface*
C *Cooker*
D *Extract fan*
E *Sink and garbage disposal unit*
F *Boiling water heater*
G *Service hatch*
H *Refrigerator*
I *Dish washer*
J *Door to dining room*
K *Desk, pin up board above*
L *Door to passage*
M *Outside door*
N *Sink*
O *Washing machine*
P *Ironer*
Q *Tumbler dryer*
R *Table*
S *Cooled larder*
T *Fridge heater*
U *Vegetable storage*
V *Deep freeze*
W *Provision storage*
X *Saucepan storage*
Y *Broom cupboard*



Estimated cost of main items of equipment excluding wall and floor tiles £1,2



Drawings by Frank Guille

Middle income kitchen

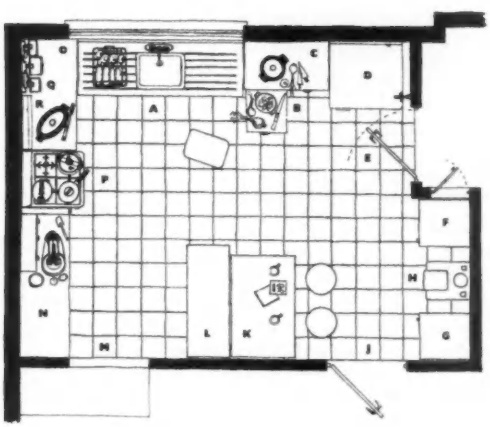
Jo Pattrick's kitchen is designed for a small family in the middle income group. The equipment need not necessarily all be bought at once, but it is chosen so that the kitchen will have a built in look on completion.

Like Mrs Bowyer, Mrs Pattrick found that a custom built kitchen would have provided a more satisfactory solution to her problems. Hers is a small kitchen (12 ft × 10 ft), and storage space is limited. She felt that the standard wall cupboards with shelves 12 inches deep, should be fitted with 6-inch door shelves for more practical use of the available space. She used storage units in wood rather than metal because she felt that these were easier to maintain, quieter and pleasanter in use. However, she found that while manufacturers of metal cabinets provide the sort of details she wanted, with adjustable and sliding shelves, racks for trays and pan storage, and practical use of space, most wooden units are not provided with these extra fitments. She also felt there was a need for more ready-made cupboards which provide adequate ventilation for the storage of food.

She believes that the 3-ft standard height for cooking equipment and working surfaces is not suitable for many women, and that the ideal solution would be for manufacturers to design equipment with adjustable legs, and provide more suspended bench units that can be fixed at any required height.

She would have preferred to use a double sink unit, but found that most of these are 7-ft long, and difficult to fit into a small kitchen. She felt that sink units should contain better provision for garbage disposal since relatively few households can afford an automatic waste disposal machine.

A *Sink, storage under*
B *Vegetable storage*
C *Working surface*
D *Refrigerator*
E *Door to back entrance*
F *Fuel and broom storage*
G *Ironing board cupboard*
H *Boiler*
J *Door to dining room*
K *Kitchen table*
L *Crockery cupboard*
M *Serving hatch*
N *Working surface*
O *Working surface*
P *Cooker, extract hood over*
Q *Saucepan storage*
R *Side grill*



Estimated cost of main items of equipment excluding wall and floor tiles £375

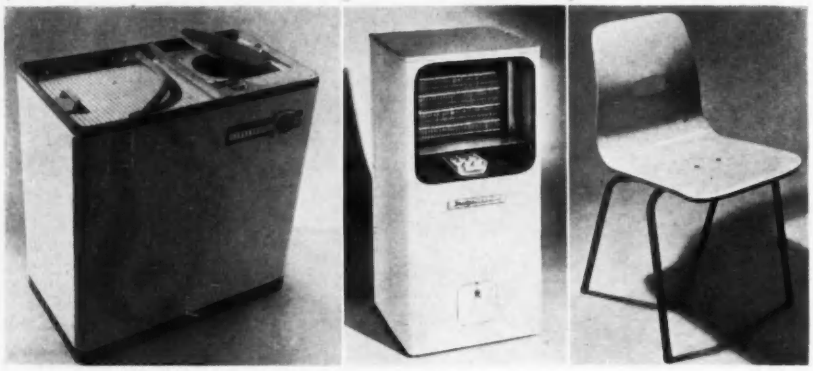
Equipment in the luxury kitchen

1 Mrs Bowyer found no washing machine equipped to dry clothes thoroughly. The 'Hoovermatic' damp dries the clothes and is supplemented in this kitchen by a tumbler dryer, which will bone dry clothes if necessary. MAKER *Hoover Ltd. Height 2 ft 7¼ inches, depth 1 ft 4⅛ inches, width 2 ft 5¼ inches.* £103.

2 The larder is cooled by this domestic heat pump, which also heats the hot water supply. DESIGNERS *B. Z. de Ferranti and J. A. Feasby.* MAKER *Ferranti Ltd. Height 3 ft, depth 1 ft 4 inches, width 1 ft 4 inches.* £159 12*s* 7*d.*

3 The 'Q-stak' kitchen chairs in the dining area have seats of washable red plastics. DESIGNER *Robin Day.* MAKER *S. Hille & Co Ltd.* £3.

1 2 3



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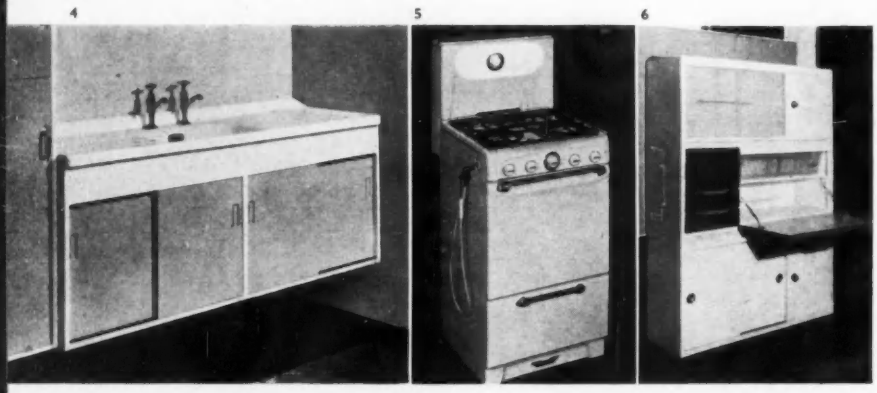


Equipment in the middle income kitchen

4 Mrs Pattrick would like to have included a double sink unit, but found that the majority are 7 ft long – usually too large for a small kitchen. She chose this suspended sink unit for its good appearance and ease of cleaning. DESIGNER *P. Bridson.* MAKER *Kandya Ltd. Price from maker.*

5 This gas cooker is supplied with a separate grill, which in this kitchen is placed adjacent to the cooker. Mrs Pattrick approved of the oven door opening downwards, as this gives the housewife a place to put hot and heavy pans. However, as the lighter and lighter button are at the side, she had to leave an awkward gap between the cooker and the adjacent work surface. MAKER *Cannon (G A) Ltd. Height (to hot plate) 3 ft, depth 2 ft 1 inch, width 1 ft 11 inches. Price (including separate grill)* £67 4*s.*

6 This kitchen cabinet is used to store china and glass, as Mrs Pattrick found that none of the conventional china cupboards on the market were suitable for her purposes. DESIGNER *George Fejér.* MAKER *Hygena Cabinets Liverpool Ltd. Height 6 ft, depth 1 ft 3 inches, width 3 ft 9 inches. Price from maker.*

Will British kitchens follow American developments?

Any discussion of ideal kitchens will inevitably invite comparisons with American experiments in kitchen design which have brought the possibility of an advanced conception of automatic control in a domestic context. The designers of the two kitchens illustrated on the previous pages have compared certain features of British equipment with their counterparts in the USA. Examples of current American practice in kitchen equipment design, as well as the latest experimental kitchens, can be seen in an article on the subject published in DESIGN for August 1957 pages 45–51.

This article raised a number of points that will become increasingly important to both manufacturers and users in this country and will particularly affect the attitude of British firms in their problems of selling in the highly competitive conditions of a European Free Trade Area. For this reason 12 British manufacturers of major kitchen appliances and storage units were asked to comment on some of the more outstanding American developments, outlined in that article, and discuss the extent to which British progress in the near future is likely to follow a similar pattern. Extracts from the seven replies received are printed below.

Packaged kitchens

The article described the problems of the American equipment manufacturer who is trying to sell appliances to a market that is already saturated. The common practice is to rely on carefully worked out programmes of artificial obsolescence to create a demand for a new product that does not differ fundamentally from the previous year's model. More recently some American firms have been investigating the new-homes market and one firm, General Electric, has produced a packaged kitchen that can be installed in a new house and included in the mortgage price. Asked if the builder market has an important future in Great Britain several firms spoke of the many difficulties that at present stand in the way.

One large firm wrote:

"We believe that there is an important future for the builder market in this country, but the indications are that this market will be slow in developing to a scale which would make quantity production an economical proposition. Before such packaged units are developed for wide use in this country it is essential that there be intimate collaboration between designers, architects, manufacturers, builders, the British Standards Insti-

tution and the Modular Society."

The following point was made by several firms: "A hazard to progress is the refusal of the Board of Trade to admit that refrigerators, washing machines, etc, are in fact 'built-in'. They are still subject to heavy purchase tax, and it is very difficult to arrange to cover them in a mortgage agreement."

Dimensional standards were mentioned by one firm: ". . . kitchen sizes and shapes vary considerably, with the result a more or less standard packaged kitchen would be difficult to design, to suit even a small proportion of houses".

One firm stated: " . . . the extensive development of prefabricated housing might, and indeed should, increase the demand for packaged units providing sufficient space is devoted to the kitchen-living area".

The article on American kitchens described the growing movement towards a combination of kitchen and living areas. Most firms approved of this development: "We agree wholeheartedly with this suggestion . . . a fundamental labour saving idea." Another firm: "Where architects have designed a combined kitchen-living room or a kitchen directly communicating with the living room, the arrangement has proved very popular. The lead must come from the architects."

Others were less enthusiastic: "The possibility of combining completely, at a reasonable cost, the kitchen and living areas is doubtful. Function must condition form and finish, and it would be quite wrong to force upon domestic equipment a living room atmosphere, which would be foreign to its function."

Selling to the Free Trade Area

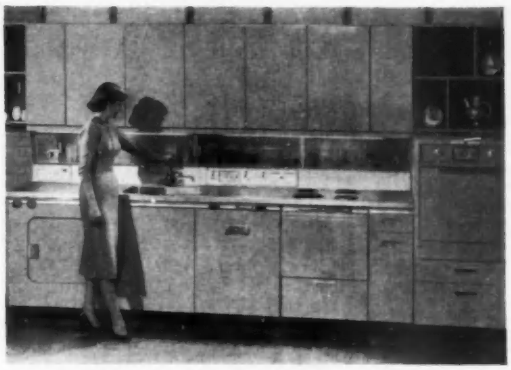
Much of the advanced development in the American kitchen appliance industry has depended on the large home market and the resulting opportunities for more extensive investment in tooling for long production runs. British firms were asked if the European FTA will provide similar conditions and opportunities.

Two firms felt confident that benefits would result: "Our investigations on the Continent assure us that without doubt this country is well ahead of any European country in the design of kitchen furnishings and appliances, and we are of the opinion that a European FTA would be of great benefit to British manufacturers of these products." Another firm: "In general, the larger market will help to justify the bigger tooling budgets which are essential for the economical production of more complex equipment."

Others felt that the FTA could not be compared with the large American home market: "One of the biggest problems will be to satisfy the demand for different types of kitchen equipment to cater for the differing living and eating habits of many Continental people. The typical French cooker, for example, is a very different article from its British counterpart. The German cooker differs from both . . ."

Evidence from leading American designers suggests that more money is being spent by manufacturers on investigations of real human needs rather than on superficial styling as a basis for future appliance design.

7



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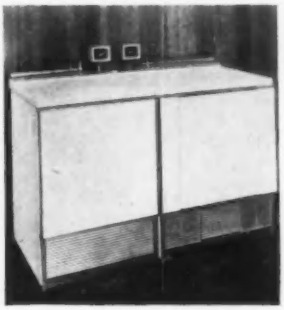

American developments

7 Packaged kitchen produced for the builder market by General Electric.

8 Dream kitchen designed to demonstrate the possibilities of automatic control by the Whirlpool-Seeger Corp.

9 Washer-dryer combination from the 1957 range of straight line units by Frigidaire. All the units in this range have flush fronts and can be pushed up together to give the appearance of a built-in kitchen.

Most British firms agreed on the necessity for such work, particularly in view of the new FTA markets: "This company has a very liberal policy in regard to development and research now, believing it to be an essential part of the planned extension of its activities. Naturally, greater turnover provides for more research into new projects and the snowball grows." Another firm: "Speaking for ourselves, we are conducting considerable research into the markets of Europe. This research is aimed largely at establishing what one might call the highest common denominator in regard to design and the lowest common denominator in regard to manufacturing costs . . . "

The size of the kitchen and the need to study the performance of an appliance in relation to its environment was particularly emphasised: "When we consider the design of kitchen appliances, we invariably come to the conclusion that we want to design the kitchen too. After a little more thought we want to design everything in the kitchen and the rooms which abut it. In this country we are still in the state of developing free-standing appliances to do the essential household tasks effectively and which can be sold at a price to make them available to the lower income groups which, in fact, need them most; . . . kitchens in this country are the smallest in the world and in general show no evidence of thought in such matters as lighting, ventilation, position of doors and availability of services."

The problem was summed up by one firm in these words: "The kitchen is the workshop of the home with high hours of occupancy, so *make it the largest room in the house*. If you can concentrate on getting this across to architects and others who design living accommodation you will be doing a service to the nation."

Leadership reasserted

new scope and variety for mechanical screen prints

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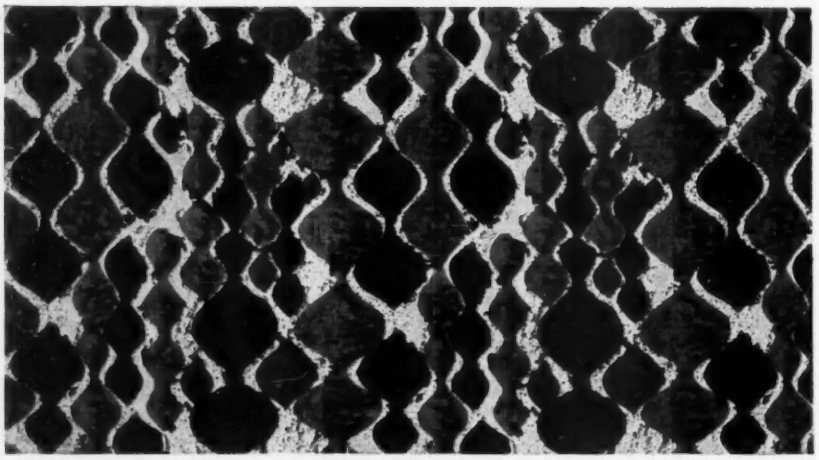


3

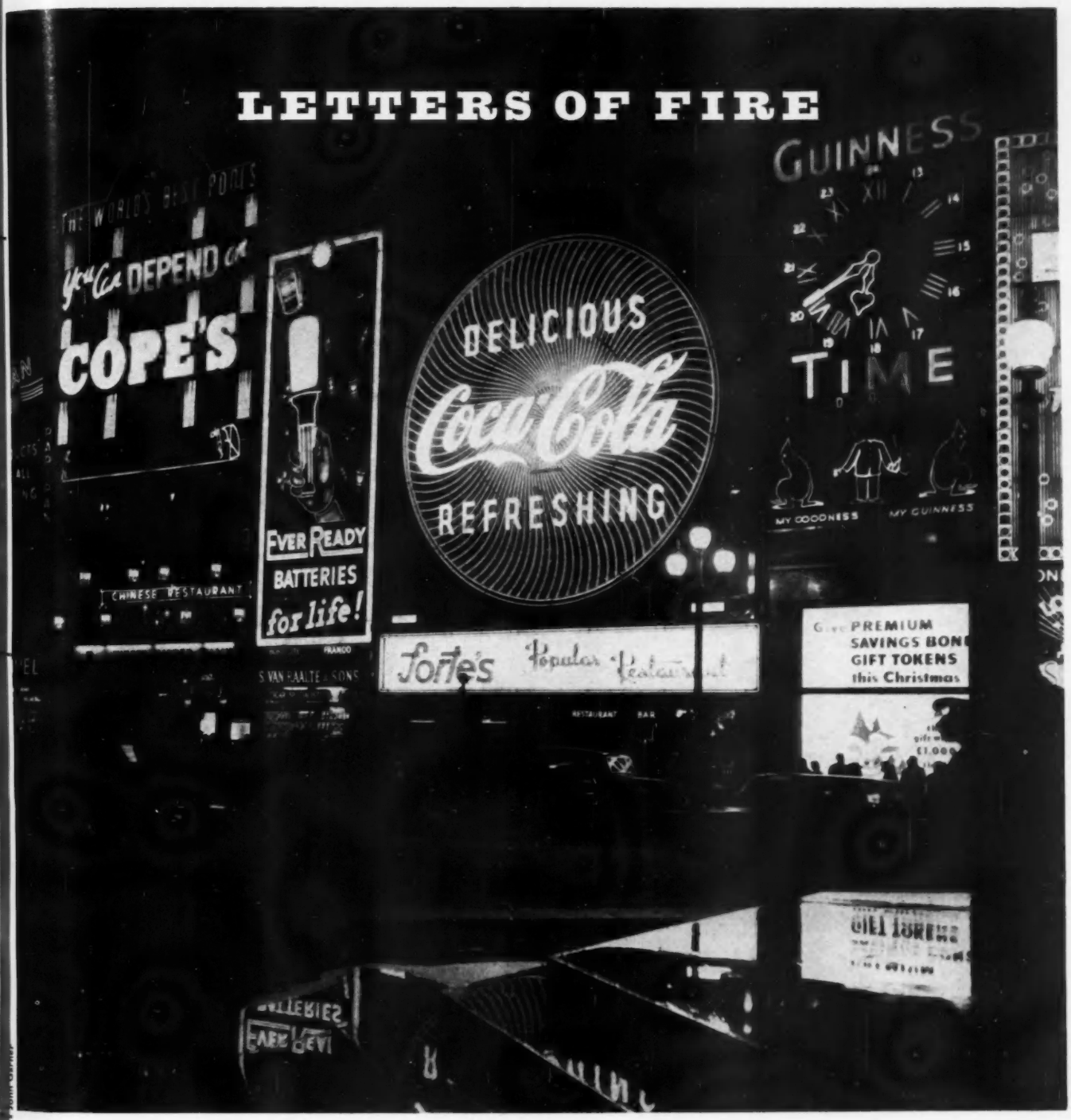
THE MAJOR IMPACT on the furnishing trade made [by] David Whitehead Fabrics eight years ago was large[ly] due to the firm's introduction of modern designs [at] prices ordinary people could afford. This meant [that] the patterns had to be roller printed, which entail[ed] long runs to justify the considerable costs of engraving. The last few years have seen the original Dav[id] Whitehead design style become the common proper[ty] of the cheaper end of the curtaining trade. Unquestion[a]bly the designs have been debased by the copiers and adapters, but even to the originator the freshness of [the] style has dimmed and a new approach was necessary.

After much experiment with relatively high-price[d] hand screen prints, many of them by well know[n] artists, Whitehead's now offer to the mass market [the] first large range of machine screen prints; three ex[-] amples are shown here in close-up. The new design[s] will retail, with a few exceptions, at less than 10[s] yard. They are on serviceable cotton cloths and [the] colours are claimed to have a high standard of fastness. It is also apparent from the new fabrics that [the] intensity of colour is greater than in the norm[al] inexpensive roller printed curtaining.

Machine screen printing is not new in itself, but [the] application of the technique to furnishings in a ma[jor] range is a most important British development. Due [to] the relative cheapness of silk screens compared with engraved rollers, it is possible to have shorter pro[-] duction runs and greater numbers of new designs. The temptation to play safe in selecting designs is reduced and so the customer can be offered a wider choice; in fact the first range will total more than 50 designs.

It is significant that this technical development re[-] lates closely to the tendency among leading designers for printed fabrics to achieve studied, casual effects. With roller printing it is difficult to preserve the free[-] dom of a spontaneously drawn original sketch. Since silk screens can be produced by photographic process[es] it is possible to ensure that freely drawn modern effects are faithfully rendered on the cloth. With this new departure Whitehead's is to be congratulated on having reasserted its claim to leadership in the design and production of inexpensive curtainings. DAN JOHNSTON

A 21-inch wide section has been chosen from each of the fabrics to show the quality of printing achieved by the mechanical screen method. **1**, CP4015 (five colourways) designed by Afro Basaldella, and **2**, CP4030 (six colourways) by Tonya Atkinson, both 9[s] [11d] per yard; **3**, CP11 (six colourways) designed by Eileen Bell, 12s 6d. All fabrics available in 48-inch width and guaranteed by the manufacturers.



The topography and typography of neon signs

ALEC DAVIS

Think of neon signs and you probably think first of what the signmakers call 'spectaculars', as seen in this Piccadilly Circus nightscape; numerically, however, signs on shops, pubs, and factory walls are far more important. An analysis of some of their design features, and faults, is given in the following article.

Letters of fire

WHETHER A NEON SIGN is to be considered good or bad, visually, depends on two things: its position and its design (including colour). Is it appropriately sited, and if so, is its appearance capable of improvement?

Position can be considered from two aspects – the sign's relationship to the architecture of the building on which it is fitted, and to the neighbourhood of which that building forms a part.

In a country with as many old buildings as Britain, it is inevitable that many neon signs have been mounted on buildings which were never intended for them, and it is hardly surprising that the results are often deplorable. As for new buildings, the architect who today designs a shop or a factory, a pub or a cinema, without considering the possible use of neon signs is first cousin to the ostrich: he has only himself to blame if they are added haphazard after he has left the scene. Good results are most likely to be achieved when the architect consults the sign maker at an early stage.

Control of outdoor signs

A sign's appropriateness to a street or district is a subject on which – besides the sign maker and his prospective customer – the authorities have something to say. A neon sign inside a shop window may be installed without express permission from the local planning authority, but for any external sign, permission must be obtained in advance; and it may be withheld "in the interests of public safety" or of "amenity . . . in the light of the general characteristics of the locality, including the presence . . . of any feature of historic, architectural, cultural or similar interest".

These words are quoted from the statutory instrument which appointed local authorities as protectors of the public eye – The Town and Country Planning (Control of Advertisements) Regulations, 1948. In cases of disputed decision, the final arbiter is the Minister of Housing and Local Government.

Some sign manufacturers employ legal advisers to make applications on behalf of their customers in a way that is considered most likely to be successful. They, clearly, know the ropes of procedure, but it is impossible for anyone to forecast with certainty the planning authority's decision in a particular case. The Ministerial policy is that every application shall be considered on its merits. What is acceptable in Shaftesbury Avenue might be an outrage in Shaftesbury. Some published decisions are, in one sense at least, illuminating. In 1953, when the present Prime Minister was the Minister of Housing, he reversed, in part, a decision of the Westminster City Council about neon signs in Trafalgar Square. Mr Macmillan appreciated "the reasons which prompted the City Council to refuse permission for the display of the advertisements in question [but] felt bound to have regard to the fact that some of the advertisements had been a feature of the Square for many years . . . looked upon by many as part of the London scene". He added: "some display of illuminated signs at night need not be excluded, provided they are suitably designed and sited in relation to

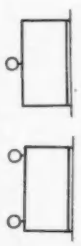
Seven *ways of constructing illuminated signs*

1

1 *neon tubing alone*

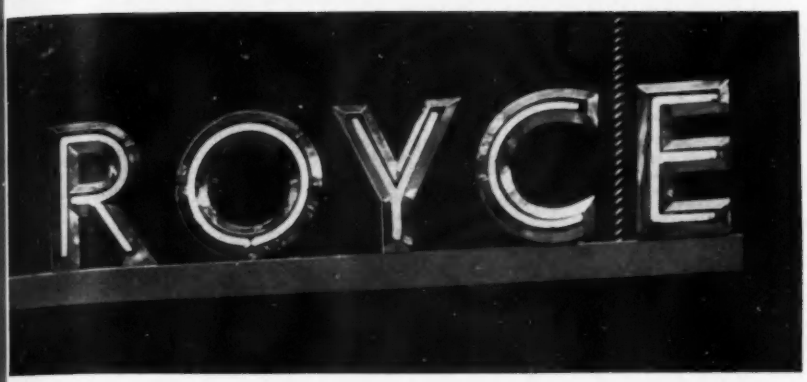
The letter forms are to some extent determined by the range of forms in which glass tubes can be bent. The eye which is prejudiced in favour of typographical letter forms (and most of the lettering we see is printed lettering), will never be satisfied by 'tortured tubing', however much ingenuity goes into its shaping.

2



2 *superimposed*

One or more lines of tubing stand proud of the surface of the letter. This is more effective when seen head-on than from an oblique angle when the lines of the tubing can become confused with the outlines of the background letters.



3 *stepped-edge*

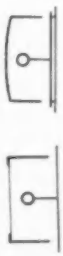
The strokes of the letter are, in section, stepped at their edges, so that tubing outlining them can be mounted flush with them. (See also **13**, **14**.) A similar effect *when illuminated* is obtained by placing tubes round the edges of a normal un-stepped letter; but the daytime appearance is less tidy.

4 *semi-recessed and recessed*

A line or lines of tubing is partly or wholly recessed into 'stencil cuts' in the centres of the strokes of the letter, as in **10**; or (especially in letters over **18** inches high), a double line is similarly recessed into the strokes near their edges. Tubing can also be fully recessed into a V-shaped reflecting surface, or into a deep trough, which tends to cut off the light that would be seen from the sides.

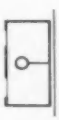
5 *built-up internally illuminated*

In these, the actual tubing is unseen behind a face of opal 'Perspex.' The sides, or returns, of the letters may be of opaque or translucent 'Perspex,' as here, or of metal as in **11**, **12**, **15**. If metal, they may be bevelled inward or outward where they meet the 'Perspex' face.



6 *silhouette or halo effect*

The effect of dark lettering silhouetted against a brightly lighted background can be achieved by using letters of opaque material which stand proud of the surface on which they are mounted, while illuminating this surface from tubes concealed inside the letters themselves. Alternatively (as here) the letters can have translucent fronts, so that some of the light shines out through them, while some still falls on the background.



7 *illuminated fascia*

Letters, usually of dark 'Perspex,' are applied to the opal 'Perspex' face of a box of any desired shape. There is not necessarily a separate box for each letter: the whole sign may have a continuous face, two or more 'Perspex' sheets being joined where the size makes this necessary. (See also **8**.)

8 The new sign for The Design Centre is in a similar category to 7 and 16. The lettering is in blue 'Perspex' and the symbol is partly sign written and partly applied in yellow and black 'Perspex' sheet. DESIGNERS *Ward and Austin.*

the buildings on which they are displayed . . . "

Three years later, Duncan Sandys (as Minister of Housing – not yet the founder of the Civic Trust) supported the Westminster Council in refusing "illuminated advertisements of an unspecified nature" on the eastern part of the front of the Criterion building in Piccadilly Circus.

The Stevenage experiment

Is it essential for authority's role in relation to neon signs to be negative? Or can authority suggest what kinds of sign it would like and where it would like them – instead of merely stating what proposed signs it will not have? Stevenage Development Corporation has given a lead in this matter. It informs all lessees of shops that there are some parts of Stevenage New Town in which illuminated signs are not allowed, some in which they are tolerated, and some again in which they are encouraged.

The corporation goes a stage further by providing lessees with illustrations of the styles of sign lettering which it prefers, **18** – a fairly wide range, made wider in effect by its willingness to consider "other suggestions, especially where the lettering forms part of a recognised trade mark or mark of a firm".

Obviously it is easier to incorporate neon signs satisfactorily in a new town than in an old one; whether other local bodies will adopt similar schemes is a matter for conjecture.

Obstacles and opportunities

Sign design is largely a matter of letter design, for wording forms the greater part of most signs (though lines of light can, of course, make striking and agreeable patterns in their own right). There is a vast amount of bad lettering in the neon signs which are to be seen today, and there are several reasons why this is so:

1 The firm that has an ugly name-style, originally developed in its printed matter or some other medium, can have this reproduced all too faithfully in a sign; technical limitations are less severe than one might imagine.

2 The sign maker is sometimes unable to do his best because the customer is unwilling to spend enough money – he wants a more elaborate type of sign than can be expected at a given price.

3 Neon signs last up to 20 or 25 years, which is too long in relation to the rapid rate of technical progress in the industry. More agreeable letter forms can be achieved today than were usual in the early days of neon.

Incidentally, many – perhaps most – of the newer signs contain no neon. The early signs, 20 or 3[illegible] years ago, were glass tubes filled with neon gas (which gave the familiar hard red glow). Today, most other colours come from the coloured fluorescent powders with which the insides of the tubes are coated; and these powders are more often activated by other gases than by neon. For certain elusive colours, it is the practice to employ tubes made from tinted glass, which also affects the colour of the light.

Neon signs, whether real or so-called, are of the cold cathode type as distinct from the hot cathode tubes used in most domestic fluorescent lighting; they have about three times the useful life of the domestic fluorescent tube but require much higher voltages (e g 10,000 volts). ('Cold cathode' implies temperatures of not more than 200°C.)

Sign types and techniques

The story of neon signs is a story of ready acceptance from the outset by showmen and novelty-seekers, reluctant acceptance by architects and town planners – their reluctance lessening with improvements in sign design.

Bare glass tubes with joins, electrodes, supporting brackets, clips, and blacked-out parts joining letters, which the designer did not want to be seen, were never very beautiful in daylight, whatever they might look like after dark (and it must be admitted that their thin lines of light, the equivalent of type faces like Gill Light or Standard Light Extended, gave them a character of their own).

More acceptable letter forms, and tidier overall appearance, became possible when sign manufacturers began to recess the tubes into broad letters, either in central slots, **4**, or along stepped-edges, **3**. In the daytime they formed fairly inconspicuous parts of the letters, which could be of almost any desired shape.

A development of the last few years has fundamentally changed the character of the neon sign; it has put the tubes out of sight inside built-up letters, the light shining out through front panels made of 'Perspex', **5** and **6**. The letter forms can now be as varied as any printer's type faces – broadly speaking, the skill of the metal worker is the only limitation on their design, provided they are not unreasonably small.

At the same time another type of sign has developed in which the front of the whole sign is made of sheet 'Perspex', with letters of the same material in contrasting tone and colour stuck on. The neon sign thus ceases to be a sign and becomes an illuminated fascia, **7** and **8**; however, it is still the product of sign makers rather

neon
TIBER
Reads
INKS
PRODUCT
PANEL

9 Some type faces of the present century which suggest, by their general character, that the flow of ideas between the type designer and the neon sign designer has not been all one way. (Two type faces have actually been called 'Neon'.)

10 Lettering designed by James de Holden Stone in 1936, exploiting the possibilities of a then novel form of sign, with opal tubes recessed into metal letters cellulosed white.

11 Fascia signs which follow this multiple tailor's new name style (see DESIGN November 1956 page 46), based on the Walbaum typeface. The thin strokes here are just about as thin as any strokes can be in internally illuminated letter forms.

12

12 These sturdy letters and their architectural background can hardly be said to be good for each other.

13 Do not blame the signmaker – he is doing his best (within limitations) to follow his client's chosen name style. That this name style compares so unfavourably with other stores, 11, for example, is not the fault of the tube bender.

14

15

16

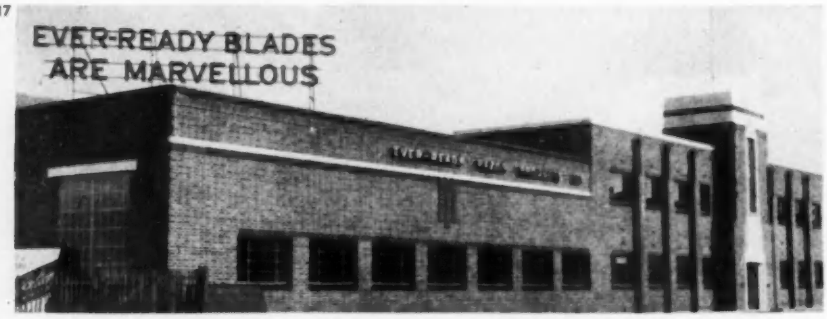
14, 15 and 16 Because of their architectural associations, Egyptian letter forms seem especially appropriate to signs (as the 1951 Festival Exhibition designers happily realised). Forms of construction here are: exposed tubes on stepped-edge letters, 14; internally illuminated letters with 'Perspex' fronts and metal returns, 15; sheet 'Perspex' letters mounted on flat panels, 16.

Manufacturers of the signs illustrated:
Claude-General Neon Lights Ltd 1, 3, 13
Franco Signs Ltd 2, 5, 14
Pearce Signs Ltd 4, 7, 8, 11, 15
Ward & Co 6, 16
The Electric Sign Co Ltd 12

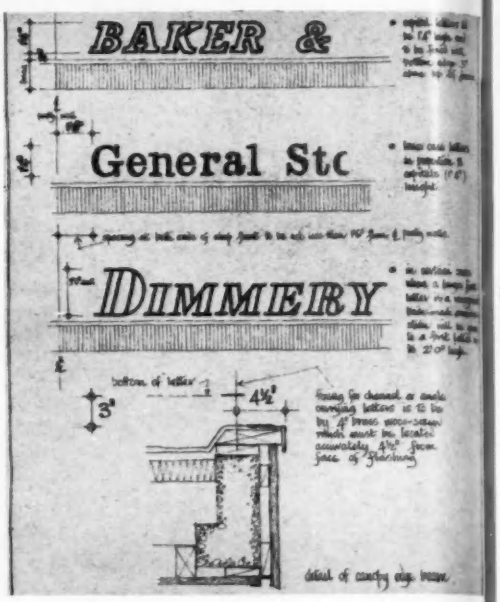
Letters of fire

17 and **18** Was the sky sign, **17**, planned by the architect of the factory, or stuck on as an afterthought? Results are likely to be better when elevation and sign lettering are planned together – which is one justification for the recommendations made by Stevenage Development Corporation, **18** (chief architect, L. G. Vincent), for prospective lessees of buildings in the New Town.

17



18



than that of builders or shopfitters.

It must be added that exposed tube signs will continue to be manufactured. Their simpler construction makes them less costly, size for size, than the built-up 'Perspex' fronted signs, and for a given degree of brightness they require less current. Built-up signs are most suitable for fascias seen from a street's width away, where maximum light power is not essential and crisp letter forms are desirable; but there is something to be said for the 'traditional' exposed tubes for signs on the upper storeys of tall buildings or on premises standing well back from main roads or railways and seen from a distance.

Although techniques of neon sign making impose little restriction on the designer, some technical factors need to be borne in mind:

1 The need for transformers and electrodes. These are necessary evils, best kept out of sight.

2 The range of tube diameters. The smallest is 9 mm (about ⅜ inch), making very thin strokes impracticable. Moreover, the kind of lettering in which a stroke swells out gradually from thin to thick – eg copperplate script – cannot be satisfactorily reproduced in tubing, because each tube is of uniform diameter throughout its length.

3 The clips holding tubes in position break up the lines of light in a way that the original designers of the letter forms did not intend – though it is noticeable that the size of the clips has been progressively reduced, to make them less conspicuous; and in internally illuminated letters, where the tubes are not seen, the clips are not seen either.

Apart from the designer's skill, the appearance of any neon sign depends largely on how well it is maintained. Their letters, as well as any fixing brackets, firemen's switches, and other paraphernalia, are very efficient dust collectors. To keep them clean is as desirable as to keep them in working order.

The industry

Most sign makers are fairly small concerns; three firms with London headquarters and provincial branches – Claude-General Neon Lights Ltd, Franco Signs Ltd and Pearce Signs Ltd – probably account for half the industry's turnover.

Though some neon signs are designed by architects and some by shopfitters, the majority take shape on the drawing boards of the sign manufacturing firms. In a firm of reasonable size the sales department usually employs commercial artists who visualise new signs in coloured perspectives with a high degree of realism; and the works employ draughtsmen, more highly qualified technically but also needing considerable aesthetic sense, to draw every detail of a neon sign full size before it is made. They provide the visual brief for tube benders, metal workers, erectors; and up to a point they are the judges of what can or cannot be made.

No art school offers specialised training for the neon sign business, and the more progressive firms find it necessary to train youngsters themselves.

The industry makes little or no use of consultants, either on design generally or on letter design. It is easy to see why. In its infancy (which has not long ended) the industry was pre-occupied with technical matters – and architects and typographers tended to regard its wares as beyond the pale, anyway.

Despite criticism the sign makers appear to satisfy their customers; these come back for more. There are, however, many people in the industry today who will agree that the biggest obstacle to the neon sign's future is its past. It has a lot to live down – but it is something that the industry is aware of the fact.

HAND WORK *its significance today*

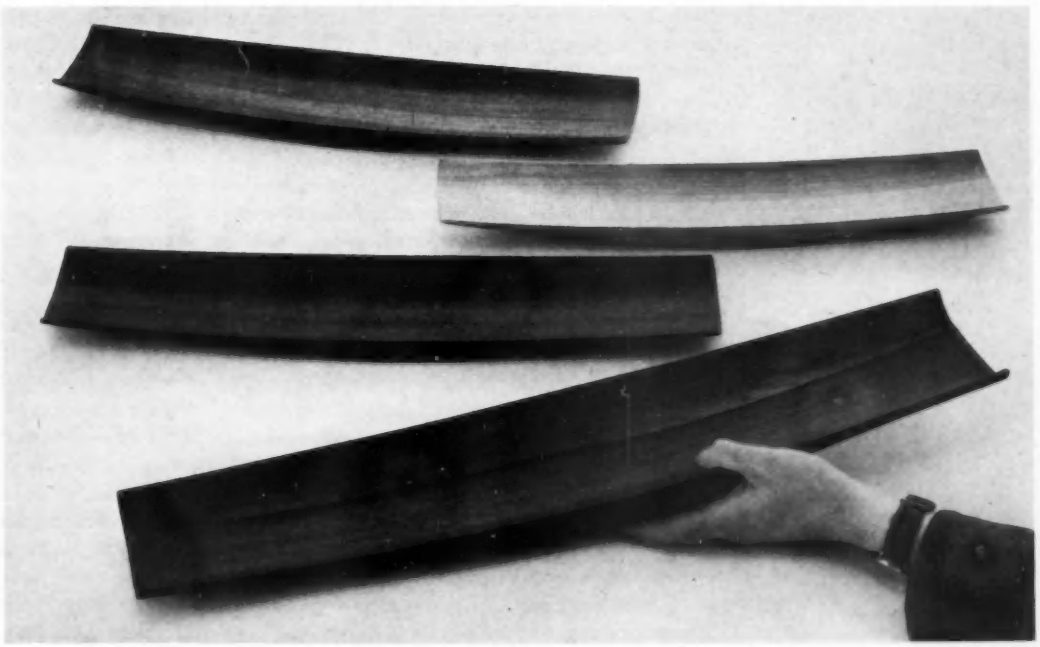
DAVID PYE

IN POPULAR TERMINOLOGY 'hand made' is the antithesis of 'machine made' and 'hand work' of 'mass production'. It is usually thought that the antithesis rests on the techniques which are used, and that hand made things are designed and made in quite a different way from those that are mass produced. Yet in fact the hand made thing will often have been made largely with machine tools, and sometimes with the same machine tools that are used in factory production.

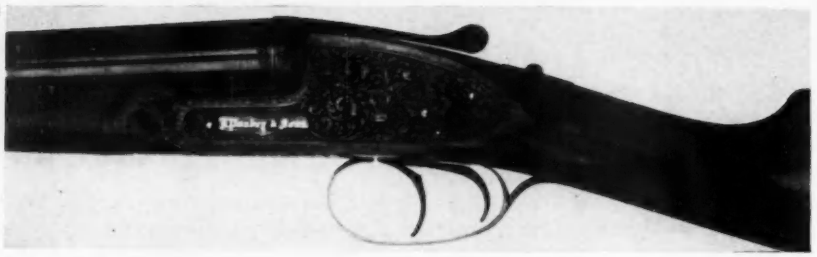
There is an antithesis, but it does not rest mainly on technique. Any attempt to define and analyse the essential nature of hand making by contrasting it with machine making will end in absurdity. To speak of a hand made thing, or of hand work, is nowadays nearly always to use a figure of speech. The antithesis, in fact, is broadly this: when a thing is hand made the designer can freely decide its form and quality; but when it is machine made or mass produced the *available machinery* will largely decide what its form and quality shall be, whether the designer likes it or not. In hand work the end will largely determine the means; in production work the means, more often than not; determine or at least modify the end.

The present economic importance of hand work is obvious, for nearly all *manu*facture is founded on it. The tools, jigs, patterns, and prototypes that have to be made before production can begin are made by hand (unless electronically controlled machines are used). But we shall find, if we consider the implications of what has already been said, that hand work has in the long run more to offer us than this. To be sure the designer for production will not always be entirely at the mercy of the machines on the factory floor. To be sure all designers delight in coping with the limitations of production technique, which they find a stimulus to their ingenuity. To be sure, even when a thing is hand made, the designer seldom has complete freedom, for limitations of cost will imply limitations of technique here also.

Yet the general contention stands. The designer for hand work in the main is free. The designer for production has half his decisions taken for him . . . "The cross section must be the same at all points along the length . . . " " . . . the joint must be made by this machine and not by that, therefore the part must be of this size and not that, therefore something else, and therefore something else in turn" – such is a typical train of thought when designing for production. The designer has to work like this because he cannot afford the more elaborate and adaptable way of making things



1 Successive developments of a design by hand work. All four dishes, three in rosewood and one in cherry, differ slightly in shape. The nearest, which is larger than the others, and the one next to it, are probably the most successful. DESIGNER and MAKER *David Pye*.



2, 3 and 4 The surface qualities and the minute details which are contributed directly by the maker, are as important as those aspects of a design which can be conveyed by drawings and specifications. 2 Stool. DESIGNER and MAKER *Peter Moos*. 3 Sporting gun. MAKER *James Purdey and Sons Ltd.* 4 Cabinet. DESIGNER and MAKER *Jacob Kjaer*.

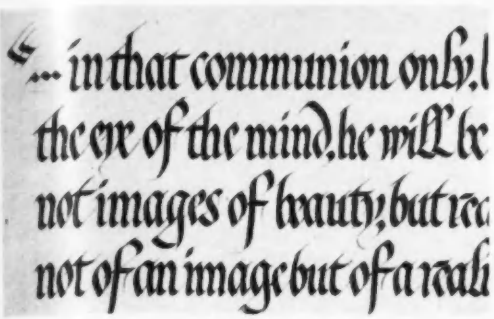
that hand work offers. All limitations of technique are in fact dictated by price – the price ticket is the master of designers. No self respecting workman will admit that limitations of technique exist at all. The only limitations he will acknowledge are those which are imposed directly or indirectly by his materials. He will feel inclined to say to the designer "anything you can invent, I can make". The manufacturer's point of view is sometimes rather different.

Freedom to experiment

In the now rare cases where hand work is used for producing a series of similar articles it gives the opportunity of improving a design fairly quickly by many successive developments. Instead of making two or three prototypes and then going into standardised production for a year or more, the designer can make each successive piece he produces a variation on the one before. It was thus that Stradivarius perfected the violin, and Uffa Fox developed the design of modern racing dinghies. The difference between the perfected design and the imperfect one is often a matter of sixteenths of an inch. Small changes can have great significance.

Again, hand work gives the designer a valuable opportunity to make mistakes. If he is designing for quantity production he is bound to be chary of taking risks, of designing things which he may afterwards regret. To see one's mistakes exhibited in every second shop window is not enviable and to let them get there is not commendable. But if a thing is only to be made once the designer may be justified in taking the risk of extending himself, and indeed he will be almost bound to do so, for there will be few limitations of technique to make his decisions for him and to excuse his failures. For this reason designing for hand work is the best test of a designer's inherent ability and the best training for designers. Limitations of technique always make the designer's job easier: until, at least, they reach the point where he is tied hand and foot (as may happen where low cost is all important).

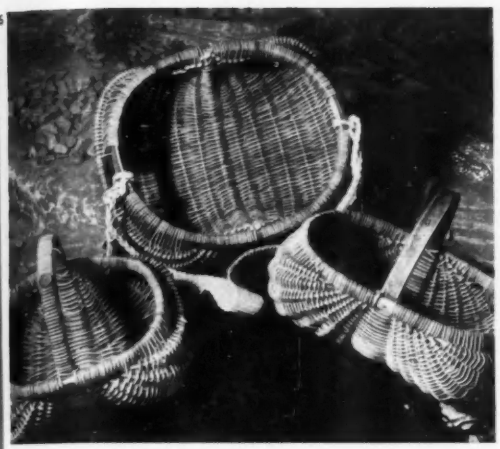
If the designer has freedom of design he is free not only to use what shapes seem best, but also what qualities of workmanship seem best, by taking full advantage of the craftsman's contribution in interpreting a design. The infinite range of the qualities of surfaces and the qualities of the execution of small details in their aggregate, do not less affect the standing of an object as a work of art than do the aspects of it which drawings and specifications can describe. The art of workmanship is in fact the design by the maker of those subtleties which cannot for practical purposes be expressed in the designer's drawings and specifications. It is the design of minutiae. It is said that hand made things owe their quality to the fact that the craftsman's hand "errs delightfully". We can all make mistakes, but a craftsman's mistakes are never by any means delightful. Except in making mistakes a craftsman's hand does not err until he is too old to control it any longer



5 A fine example of calligraphy by Edward Johnston. The approximate size of this detail is 5×8 inches. (By kind permission of Mrs P. Gill.)

6 Traditional creel and baskets from Arbroath.

7 Limitations of technique will not make decisions for the designer of hand made things. Here, the chair arm and the joint at the head of the table leg are beyond the capabilities of ordinary wood machinery. DESIGNER *David Pye (for Eothen School, Caterham).* MAKER *R. Lenthall (cabinet maker, Royal College of Art).*



(as in Bewick's engraving which shows his coffin on its way to the grave: an infinitely pathetic thing). It does not err. It does not move without executing his intention. If he wants an effect of careless freedom, he will give it. If he wants an effect of rigid precision he will give it. He will carry design into forms so small and subtle that they all but elude the eye. The characteristic quality of hand work which has always been prized is not accidental but designed: the result of deliberate intentions about the shape of very small details and qualities of surfaces. The fact that these intentions cannot be conveyed in drawings or words does not prevent their being important.

Spontaneity and precision

There are certain things of which the design and execution must be done simultaneously by the same hand; for example calligraphy, and to some extent carving and chasing. You cannot make a working drawing for a piece of calligraphy and then get someone else to execute it. The idea is nonsensical. The qualities of calligraphy (which, let it be repeated, are *not* accidental) are such that they must be developed in the act of execution or not at all. The design of the minutiae (which in certain forms is by no means beyond the reach of quantity production) will only achieve its full potential if it is spontaneous.

Hand work is valuable, then, not only in an economic sense, as a necessary preliminary to all manufacture, but perhaps still more because it makes greater demands on the designer than his usual work, and gives him opportunities to make experiments and to develop his powers which would otherwise be denied him. And because, more important still, the arts of workmanship can only find their full expression in it.

Such are the advantages of the liberty which comes of hand work. The price of it is high, and few people can afford it. The hand worker is constantly tempted and pressed to try to make his work a little cheaper in order to sell it a little more easily. A little pressure of that sort will do good, but more than a little pressure is very bad. You soon reach the point at which you can only cheapen things by making them worse: by accepting an impoverished technique or, in the ultimate degradation, by using inferior material.

If what has been said above makes sense, hand work, of small immediate economic importance in itself, must, in the long run, have a most important influence on the standard of workmanship and design which prevails throughout industry. It is therefore important that hand work of this kind should continue to be done, not only for its intrinsic value as art, but also because of its influence in the long run on practitioners of industrial design. Hand work of this sort will not be done unless there is a demand for it. Therefore if you have money to spend, demand it. And if you do so, see that you have the very best of design and workmanship. If you are going to pay the piper, take care to call a good tune.

overseas review

Canada Opportunities for the British exporter

Gordon Churchill, Canadian Minister of Trade and Commerce and leader of the Trade Mission seen here in The Design Centre.

J. Arthur Clark (left) president, Maritime Asphalt Products Ltd with R. W. Ganong, chairman, Canadian Manufacturers Association, during their visit to The Design Centre.

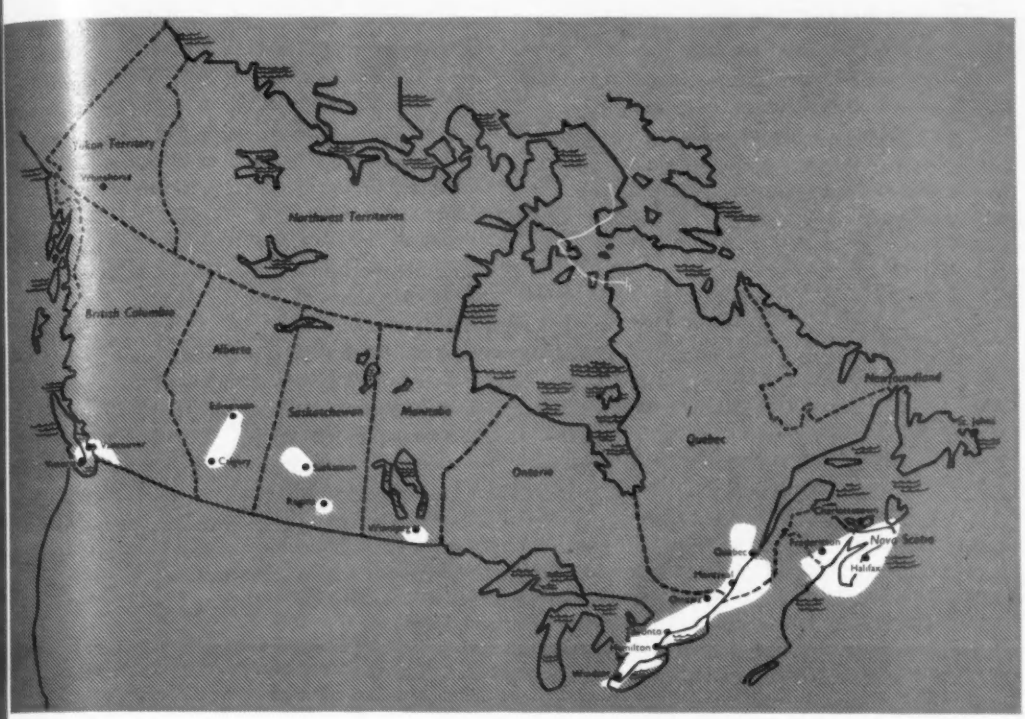
John Bonus (left), general manager, British Trade Centre, Toronto, and manager of the Association of British Manufacturers and Agencies in Toronto, is shown here with John E. Blake, deputy editor, DESIGN, examining an example of modern British cutlery. "Designs of this type should be very popular with Canadians", he said.

The numerous discussions on the European Free Trade Area have largely centred o the problem of Britain's conflicting loyalties to Europe on the one hand and th Commonwealth on the other. Whatever the final solution will be, it is clear that the U will have to maintain and if possible increase its sale of manufactured goods to th countries of the Commonwealth to help pay for the imports of agricultural product which the Government hopes will be excluded from FTA agreements.

Attention to Commonwealth markets can too easily be obscured by pre-occupatio with the FTA. For this reason the following article, the first of a new series, outline prospects for British exporters to one of the most important of Commonwealt countries, Canada. Later articles will review prospects in other Commonwealt countries and will alternate with the surveys of design trends in the FTA, the first o which was published last month.

The opportunity for increased trade with Canada has been given special prominence a a result of the visit to this country last autumn of the Canadian Trade Mission, an more recently of the formation of a new organisation called the Canada-Unite Kingdom Council. Some members of the mission visited The Design Centre durin their stay and spoke enthusiastically of the chances for increased sales of British con sumer goods to the Canadian market. Several remarked on the expanding populatio and growing prosperity in Canada which is leading to a demand for high quality goods Canada's adverse trade balance with the USA would mean that Canadians wil increasingly turn to Great Britain for the goods which they have been obtaining fro America – but British goods will have to compete with the advanced design standard of many American products. Although, as one member remarked, "the field is wid open", the requirements of the Canadian market need careful investigation by potentia exporters. John Kettle, the author of the article beginning on the opposite page, who i editor of 'The Canadian Architect', outlines some of the problems to be faced. He describes the vast distances of the country which is much bigger than the USA bu with a population only twice that of London, the extreme variations of climate, th differing tastes of the people, and the peculiar difficulties facing the Canadian manu facturing industries. Against this background he points to the types of product whic he considers would stand the best chance of success in the market.

The illustrations of Canadian products, chosen from the Canadian National Industria Design Council's 'Design Index', show the growing awareness of high design standard among Canadian manufacturers and consumers. This is also reflected in the standard of imported goods on sale in the shops. The author has been round the stores and ha photographed some of these imported items which have been commercially successful and a selection of these photographs is reproduced at the end of the article.



The white areas on this map of Canada show the main areas of population and industry. For comparison Great Britain is shown to the same scale.

JOHN KETTLE

IT IS A COMMON MISAPPREHENSION in England that Canada is rather like the UK, but a bit more Americanised. It is an equally common misapprehension in the USA that Canada is pretty much like the States, with a British accent. The truth lies elsewhere.

Canada presents its native manufacturers, wholesalers and retailers with a problem which, if it were forced as a whole on merchants of any other country, would seem devastating. The problem is tolerable to Canadians since the disadvantages have grown slowly, have ramified over the generations. Put briefly, the problem falls under three headings:

Physical The country is huge (an Englishman sending his children to Canada asked a Canadian friend to meet the children off the boat at Halifax; the Canadian, who lived in Vancouver, replied, "You meet them; you're nearer!"). Its population is strung thinly along the southern border, over thousands of miles. The climate is almost global in comprehensiveness, and large Canadian centres suffer temperatures varying by at least 120°F – from 60° or more of frost to 90° or more in summer, in Montreal for instance.

Social A seventh of the population today is foreign-born, a fifth (more than three million people) speaks no English, nearly a third is deeply embedded in a culture – the French Canadian – wholly different from the rest of the country. The population is growing, and changing, at a tremendous rate. Because of its physical disposition along a great, narrow strip of countryside, regional tastes split the national market into many, even smaller communities of a few millions each. Because it is a growing country, the undeveloped tastes of teenagers have a great influence – and a third of the population is under 18.

Economic Under these circumstances, producing *anything* for the national market is hard enough; producing a line of high quality goods is unthinkable. Both the UK and, overwhelmingly, the USA have invested in Canadian manufacturing in recent decades, to the point where perhaps one in ten of Canadian manufacturing firms is a foreign subsidiary, with an even higher proportion of the country's products coming from these firms. For the manufacturer not backed by foreign money (nor, perhaps even more important, by the availability of foreign design, development research and even actual dies and tools), the setting-up of a production line is a daunting prospect.

Here is a country with a population of Czechoslovakia's proportions, in an area markedly larger than the USA; a population with the living standards and wages of Americans, yet with a work force a tenth the size; a population able to buy mass produced American goods with dollars worth more than the American's own dollars, yet incapable of the mass production to match them at home; a population so varied in its tastes that it is like the whole western world in microcosm; a population in which one person in ten is a post-war immigrant, adding to the variety of tastes, the

labour force, the need for goods – and the confusion. Add to this the fact that *unit* marketing costs, labour costs, distribution costs, are as high as, or higher than, any in the world; while almost nothing is cheaper.

There are five main alternatives facing the Canadian manufacturer:

1 As a subsidiary of a foreign company, he can make a reasonable shot at an economic operation when the parent company has covered the greater part of initial costs by producing for its own home market.

2 As a purely Canadian manufacturer, he can try to cash in on the advertising and market preparation done by these foreign subsidiaries by making something similar.

3 He can produce a regional item, of provincial quality, in provincial quantity.

4 He can produce a competitive common object (pencils, paper bags, combs, T-shirts, bread and so on).

5 He can look to the very few peculiarly Canadian needs.

There are few exceptions to this summary of the Canadian manufacturer's plight; and when we consider that export, because of original costs, is wellnigh impossible except to the USA, and wellnigh impossible there because of that country's own extraordinarily diversified and efficient production, you begin to understand why Canadian shop windows are full of imported goods and poor home products.

Now, this is a gloomy picture for the Canadian manufacturer. Over the years, it has taught him to be cautious, yet also to be very persistent in his pursuit of improvement: always there is the challenge of better imported products against which he must match his own. It has taught him to exploit, to the utmost, every last ounce of ingenuity of design and manufacture.

The National Industrial Design Council, closely patterned on the CoID in London, and now approaching its tenth year of activity, offers the manufacturer and the designer a good deal of quiet encouragement and assistance. The most public thing it does is to run an annual design competition, which increasingly draws attention to good native design and manufacture. Unlike the CoID, the NIDC lacks, of course, the export trade as a powerful incentive to improve design standards. Where the CoID can use the possibilities of increased exports as a sound reason for reconsidering design (or considering redesign), and can provide advice and assistance to a would-be exporter, Canada's NIDC has no such carrot to hold before the Canadian manufacturer's nose.

Designed in Canada

The annual design awards are growing in public support and prestige. Significantly, the NIDC has lately been able to announce an increasing number of winning designs awarded to Canadians. The proportion (1957 awards) has now reached the point where 73 per cent of the prize winning items were designed in Canada. I would hesitate to say whether this is a true picture of the national market generally. For instance, 30 Canadian designers took 45 awards; the Canadian winners, many of them, have been special objects of high pri and limited market; the foreign designs, on the whol have been of mass produced goods. I can only think one Canadian furniture manufacturer making well d signed furniture for the general market; of only o Canadian electrical appliance manufacturer in the sam situation. Both have been represented by multip awards annually.

Perhaps the sole advantage the Canadian manu facturer can claim is that he has a largely unsophistic ted market, with no common tradition (except in th province of Quebec). There is no elephantine prejudi in favour of what was good enough for grand-dad, n in favour of solid nineteenth century quality; nor is th latest European whim of much importance to hi Canadians, on the whole, like something up-to-da and workable, something that looks as though comm sense had had a big hand in its design and manu facture. It is easy to *push* them into buying somethi flashy – once; left to themselves, they tend to choo the obviously reliable product.

Taste for borax

There is a special problem facing the enlightened an ambitious manufacturer (or foreign exporter sendi goods to Canada): the inability to distinguish betwee good design of current, international standard, and de sign which must be described as modernistic. This obviously inherent in the population's general lack o sophistication. The source of this modernistic design the United States; the cause, technology; the effec gaudy, garish, borax. The article 'Space for Decon tion' published in DESIGN for May 1955, which di cussed some of the underlying causes of this taste fo crude ornament, struck home with special effect a Canada, and it is this problem which particularly exe cises the NIDC in its present relationships wit Canadian manufacturers and their designers. The en couragement, first, of honesty and simplicity, an second, of some essentially Canadian character in de sign is at once the Design Council's most difficult an most worthwhile task.

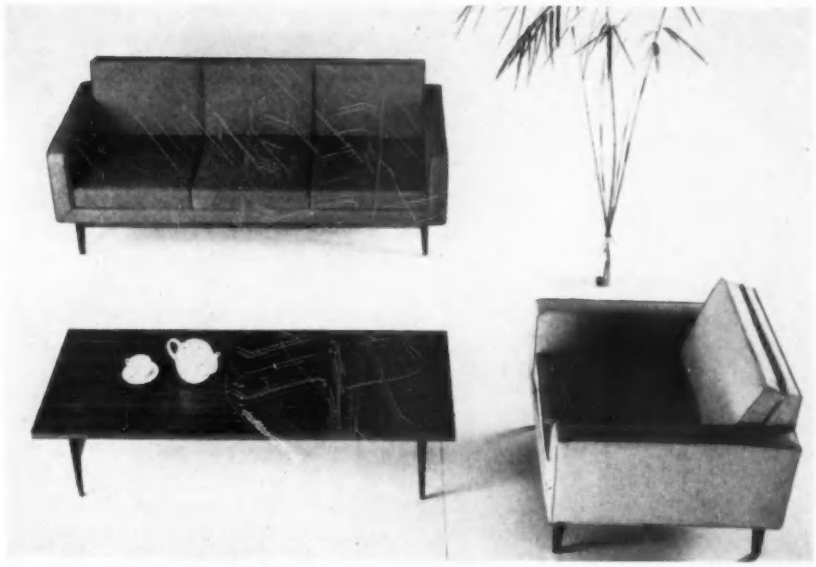
A cautionary tale might be derived from an irritatin vogue recently sprung up among furniture manu facturers, whose models currently are made up o pseudo-oiled walnut and teak. Investigation indicate that what we are seeing is a Canadianised version of a Americanised version of the less attractive elements o Scandinavian design (complete with all the wrong de tailing) – something which is distressing equally to th manufacturer who is continuing his pleasant line o really Canadian furniture, and to the importer o genuine and successful Swedish or Danish furniture And this sort of story might be found, with variant throughout Canadian manufacturing. Without que tion, however, the NIDC is making progress, slowly in bringing to the producer and the consumer and th middle men some conception of good design.

From all this (from almost *any* generalisation about Canada) one must except Quebec, a province of fiv million people who constitute themselves a separate

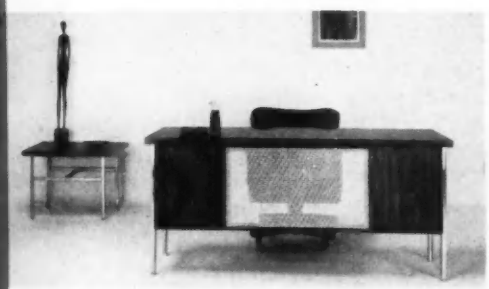
Goods made in Canada

This selection of Canadian products, which continues on pages 63 – 64, is made from the NIDC's 'Design Index', whose purpose and function match those of CoID's 'Design Review'. With one exception, the designs are of recent date (since 1953): the exception is the hand woven, Kraft paper rug, designed and first made in 1916. Many of these products would not be available nationally to the general public. Most of the furniture and fabrics would for instance be available only through interior designers: 9 of the 16 items have won NIDC design awards in one of the three years 1955-7.

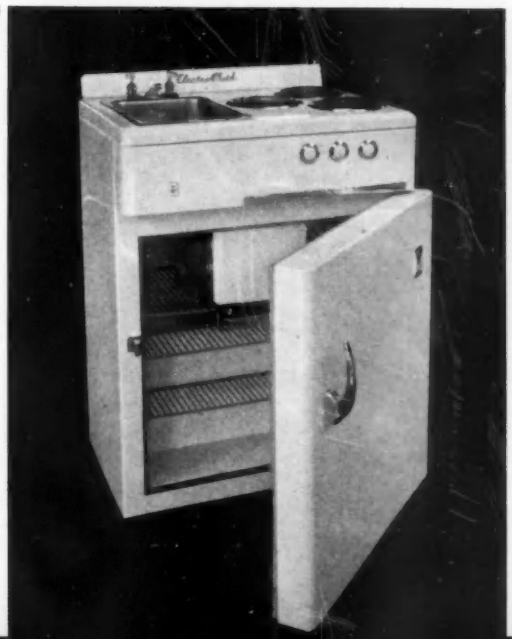
1 Lounge suite designed and made by the Vancouver firm, Robin Bush Associates. Robin Bush currently distributes his furniture mainly through architects. The chair and sofa are both of light wood construction, with foam rubber padding, and are in the $350 – $450 price range.



2 and 3 Office furniture designed by John Brook for the Toronto firm, J. & J. Brook Ltd. It is part of his 'Modulator' range, is made of walnut, brushed chrome and cane, the tops being either walnut veneer, or 'Formica' in beige or imitation walnut. Two-pedestal desk $335; executive desk with side unit $620; single pedestal desk $229; bookcase $120 – $180. 1957 Design Award.



4 An ingenious combination of cooker, sink and refrigerator, this product probably has its greatest sale for summer cottage use. It is rather highly priced at $430 (one can buy a larger refrigerator and a four-burner stove with oven for $100 less, together), but compactness is an obvious advantage. Canadian Armature Works Inc's own designer, M. Nathanson, designed it in 1954. It won a 1955 Design Award



5 Designed and made since 1953 by the Percy Hermant Co, Toronto, this polyethylene container has the advantage of being light, pliable and not likely to crack or break, at the same time resisting the acid action of warm or cold fruit juices; and at 69c or 79c (depending on size) it is excellent value.

realm, with the oldest traditions (except for the Eskimos and the Indians) in the country, with the most deeply dyed conservatism and the most atypical tastes. Most British exporters should treat with caution the consumer market which Quebec represents.

The rest of the country is a quite different matter. Here is an analysis of the country of origin (traced back to the original immigrant) of the whole population:

French	31 per cent	Ukrainian	3 per cent
English	26 per cent	Dutch	2 per cent
Scottish	11 per cent	Polish	2 per cent
Irish	10 per cent	Other	11 per cent
German	4 per cent		

Opportunities for British exports

There is an apparently growing market for British food: the supermarkets are expanding their 'Hostess Bars', their biscuit counters, their jam shelves, with British products. British cars I will not speak of; the situation I imagine, is identical with that in the USA (country-wide service problems, Volkswagen, two-car families, the whole range of plusses and minuses).

British domestic electrical appliances do not seem to have sold well in Canada mainly, I suppose, because American-designed stoves and refrigerators, washers and dryers, air-conditioners and de-humidifiers, are more modern in appearance and technologically more ingenious. But a good, cheap, apartment-sized electric (or, now, gas) stove – with three or four burners, measuring not more than two ft across, and selling for $100 or less – should have a good chance. But the small refrigerator, except for special, comparatively rare uses, will not sell.

Canadians are born hunters and sportsmen. They like shooting, fishing, skiing, and buy a good deal of this type of equipment. It is largely a quality market, though not exclusively; both the reliable, expensive piece, and the usable cheap piece would find a ready market.

Competitive price and quality

The whole range of home furnishings and fittings would seem to offer good opportunities for British exporters: glass, china, pottery, stainless steel cutlery, carpets, lighting fixtures, fabrics, even furniture. I have, for instance, seen none of Heal's, or Hille's, or Morris', middle income furniture on sale here, though I imagine it would have a strong appeal to a considerable proportion of the young furniture buyers. British shoe manufacturers, I know, in some cases season their shoes for the dry Canadian indoor conditions, and furniture manufacturers could no doubt overcome the warping problem in much the same way.

The success of 'Rotaflex' lighting fittings designed by John and Sylvia Reid has been remarkable and rapid. The firm started off by going against all the tenets I would generally propose to British manufacturers entering Canada – did not advertise much, concentrated in a few stores, and so on – but nonetheless found a very ready market. All these goods, needless to say, would have to be competitive in price or quality or both.

I discussed the question of clothing with a Canadi couple who, I thought, were likely to buy British. T man habitually wears clothes tailored from Briti cloth, though not shirts, ties, shoes or other accessori He feels (I think I detect a note of irony in what h says) that more people will ask for British cloth in th suits, jackets, and trousers only when more people go t tailors: off-the-peg British clothes, he thinks, have n chance (but he did not mention that most off-the-p clothes made here use British cloth). The woman s that English dresses, compared with American dres (both are fairly widely available in Canadian shops), a less attractive to her. "Why?" "The American clot have a quality of *hard elegance* which the English c not match. The colours of English clothes are pas the prints are genteel, the cut is formal or soft. Th are designed, in general, for domestic women – an even if we're domesticated, we're not domestic. W like casualness, swagger, brilliance. You can sell m denim pedal-pushers for summer wear, but not garde party cottons."

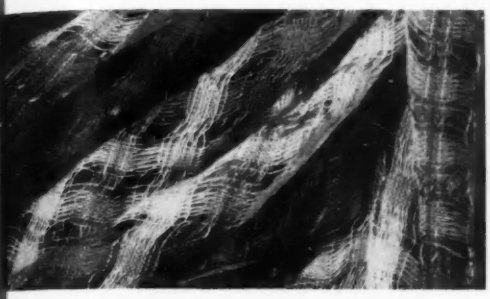
Wholesalers asleep

What Prime Minister Diefenbaker's Anglophile Co servatives, and specifically the Canadian Trade Missi which toured last year, will do to alter the gener picture of export opportunities for British manufa turers, it is hard to foretell. On the face of it, chanc should be better – much better. There is no question i my mind that a great many more British goods could b sold in Canada if merchandising and distribution we improved. I have outlined the sort of person who i buying, and the sort of thing I think would stand be chances; but you can sell Canadians nearly anythi you can sell Britons, if you advertise it properly and ge it into the shops. You can sell Canadians records o Elvis Presley, Cadillacs and tartan socks; after tha surely nothing is impossible. The use of a Canadia advertising agency, with a very high initial advertisin budget, and an arrangement with a large, well estab lished Canadian wholesaler, are two steps which are, am sure, absolutely essential. In some cases, expor import houses which knew the market well before th war give every indication of having fallen asleep in 193 and of now continuing in a curious dream which bea little relationship to today's facts and today's potentia Careful investigation into the right type of agent, pe haps even in Canada itself, would seem a sound ste The exporter is so much in the hands of his wholesale

The increasing international value of the Canadia dollar makes it a particularly attractive target for th British exporter – in more ways than one. If a Canadia buys British goods worth £1 it costs him $2·75, but th goods are often still worth the pre-devaluation $5 or s He is very keen to take advantage of this bargain rate and increased international value for Canadian dolla just makes the bargain better. The situation is m likely to revert in the next few years.

It is not an easy market for anyone, native or foreig but anyone who has succeeded in it will tell you ju how worthwhile it can be.

6 Dining chair designed by Robert Kaiser, Downsview, Ontario, and made by the Primavera interior design group, of which he is a partner. It weighs only six lb and is made of walnut and chromium plated steel rod. In muslin, it sells for $55.

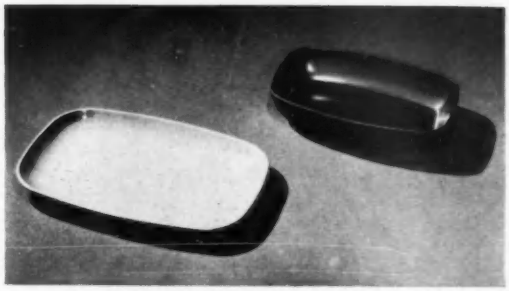


7 'Open Sheer', a fabric designed by Karen Bulow, Montreal, for Canadian Homespuns Regd (she is the firm's designer). Materials are cotton, linen and rayon. The fabric is distributed through the manufacturer and J. & J. Brook Ltd. $7.50 – $9.50 a yard, 50 inches wide.

8 Pots and pans, made and designed by the Sunshine Waterloo Co Ltd, Waterloo, Ontario, from stainless steel, with aluminium bottoms bonded to the outside of the pan. Prices range from $8.95 – $11.95 (saucepans); from $8.50 – $13.50 (frying pans); and from $15.95 – $19.75 (double boilers). 1957 Design Award.

9 Cast aluminium fireplace accessory, designed and made by E. A. Morrison, Victoria BC, since 1954. It has a birch handle, is black in colour, and sells for $10.95. 1955 Design Award.

10 This lightweight melamine bowl and platter are made in a range of 24 pleasant colours. They have been on the market for five years and have the durable qualities which have brought plastics so rapidly into the home. Designed and made by Maple Leaf Plastics Ltd, Toronto, they won a 1954 Design Award. Bowl $3.50; platter $4.



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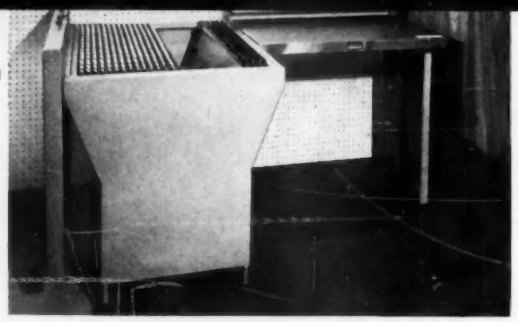
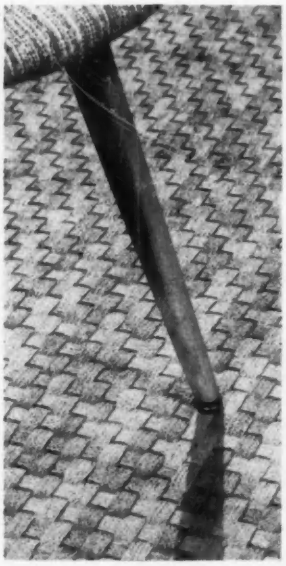


11 Record keeping equipment, designed by B. T. Taylor an R. S. Malton for their own firm, Vertical Records Co, Toronto. I is part of the 'Viscard' line of office equipment, is made of stee with aluminium dividers, and weighs 355 lb without cards. It i fin shed in green baked enamel and costs approximately $47 1956 Design Award.

12



14

12 These hand woven, Kraft paper rugs were first produced in 19 and are still made. Kraft Paper Products Ltd, St Johns, Quebec, the designer and maker. The paper is twisted before being wove $5.95 per sq yd.

13 Polyethylene grips for standard ski poles, designed for Th Allcock, Laight & Westwood Company of Toronto Ltd, by th firm's staff designer, J. Douglas Mossop, and made since 195 The grip was designed to simplify grasp and release, and t reduce the amount of strap in the hand. $1.95 a pair. 1957 Desig Award.

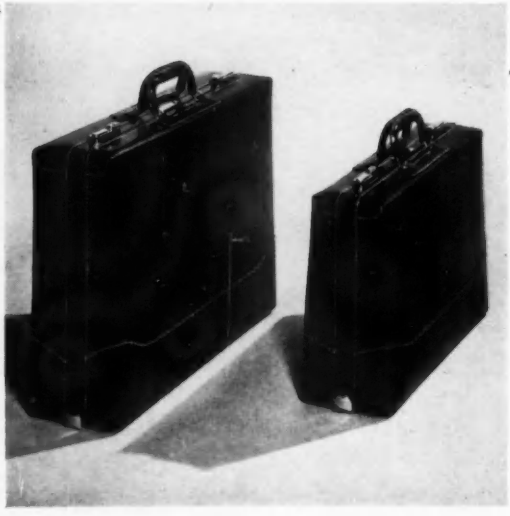
14 Hand printed furnishing fabric, 'Gina', designed by Montre Fast Print for A. B. Caya Ltd, Kitchener, Ontario, in 1956. Th fabric sells at $3.95 a yard and is 48 inches wide. The materia are cotton and viscose. 1957 Design Award.

13

15

15 Designed by the parent company's staff in the USA, th electric griddle is made in Canada by National Presto Industri of Canada Ltd, Wallaceburg, Ontario, and won a 1957 Desi Award. It is made of aluminium, with a 'Bakelite' handle and hi glass cover. The plug-in 'Control Master' is common to a wi range of similar appliances made by this firm. $21.90.

16

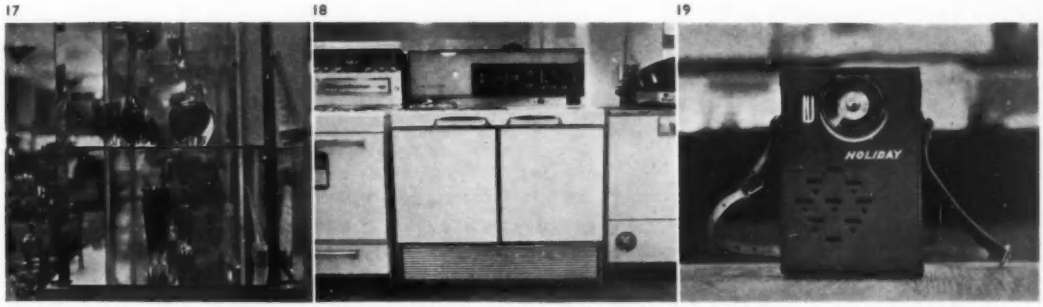


16 'Renwick' luggage, designed by Edmund Schnitzer f Premier Leather Goods Co, and available in five shades (charco grey, saddle tan, copper tan, turf tan, aniline) of leather. This fairly widely available: prices range from $27.50 – $100. 19 Design Award.

Imported designs

The nine illustrations on this page show some examples of products from the UK, Canada, Europe, America and Japan that have been successful in the Canadian market. The majority were photographed in Toronto shops and stores by the author.

17 18 19

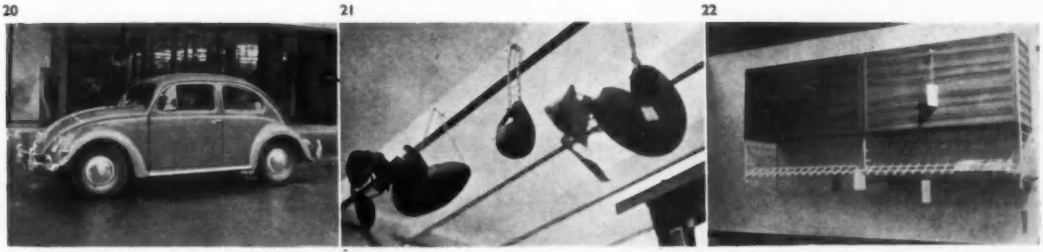


17 Orrefors (Swedish) glass bowls and vases, priced in this Toronto store at from $12.50 to $25 a piece (average price of these 10 pieces: $18); an internationally-familiar import.

18 An enormous American Frigidaire electric range (nearly four ft wide) selling in Toronto for $389. This is one of a new line of crisply-designed, though still rather frightening, appliances from Frigidaire which has at last brought clean, square edges into the kitchen. Even the lettering on the control panel at the back is good. The colour scheme is black, white and aluminium.

19 A tiny Japanese all-transistor portable radio, shown here with an added case ("genuine leather" for $2.95 extra). The radio's plastics casing is gaudy – cream, scarlet and black, with automobile style trim. It works for weeks on flashlight batteries; is about seven inches high and was selling in the suburban record store where it was photographed for $54.95, though it is rumoured a down town discount house has it at about $26.

20 21 22

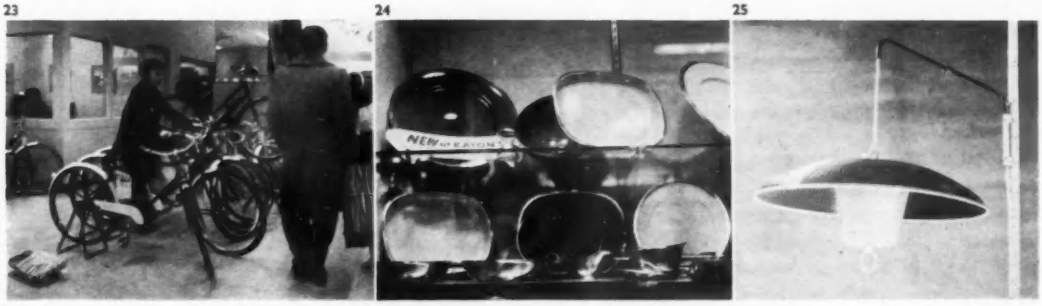


20 The ubiquitous Volkswagen, here driving past one of Toronto's new elevator parking garages with the easy disdain of one for whom parking is a lesser problem. Price of the standard model, delivered in Toronto: $1,580.

21 An interesting small item, these terracotta hanging flower pots come from West Germany and were selling (without plants) for around $1 and $1.50 at the New Year.

22 Unit hanging shelves, bureau and cupboard, from Sweden. The components shown here, all part of the 'String' line are in the luxury class and would retail for about $250.

23 24 25



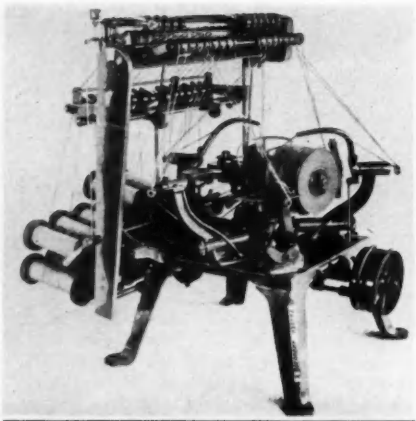
23 British bicycles are hardy import perennials the world over. Some shown here are Canadian-made; the majority are manufactured by Raleigh Industries Ltd, at retail prices varying from $48 – $85. Some were specially made in England for Simpson's, the Toronto store.

24 Enamelled steel hollow-ware from Denmark. Colours are excellent: deep, clear, convincing red, green, blue and yellow. For the plain steel and the enamelled steel platters, for instance, prices are around $10 – $15; the deep, enamelled mixing bowl is $15.

25 This lighting fitting, which is part of a room divider, has Canadian-made brass fittings and wiring with a British 'Rotaflex' shade. It sells complete for about $55.

Miscellany

1



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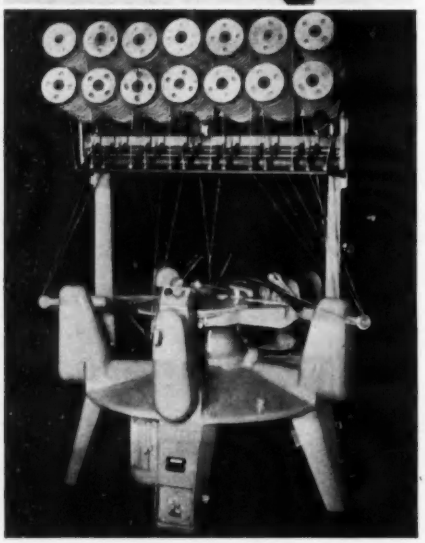


A matter of appearance

Douglas Fraser & Sons Ltd of Arbroath, manufacturers of textile machinery and machine tools, is a firm which regards the good appearance of its products an important factor in their function. Hugh Fraser, the present chairman of the company and its design director, feels that a concern for a machine's appearance can do much to make the system, of which it is a part, a more efficient one. Typical of the firm's products is the 'DB Plaiter', **1** and **2**, originally patented in 1881. Since that time several variants have been produced, such as the 1937 version, **1**. In the latest model, **2**, a great deal of the mechanism has been tidied up, especially that on the supporting table, which has been redesigned to incorporate the motor control gear within one of the legs. The bobbin bank has been simplified by its rear position above the machine.

Design through research

It is not an uncommon thing to find research being carried on in laboratories with hastily contrived equipment, known in the back room as 'lash-ups'. However there often comes a time when a permanent apparatus is necessary. The Fluids Division of the Mechanical Engineering Research Laboratory at East Kilbride recently developed an apparatus from a 'lash-up' or pilot stage to a model for manufacture and general use.

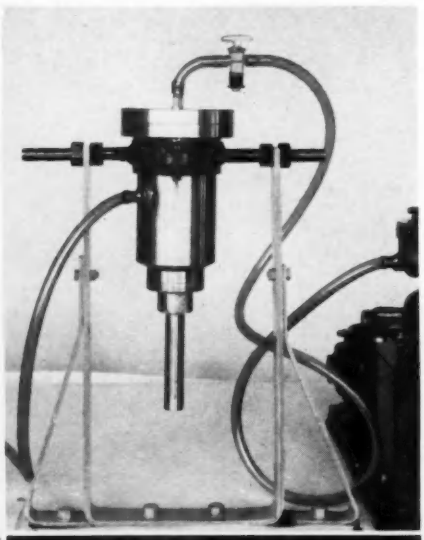
The apparatus in question was conceived for measuring the air content in hydraulic oils, and its pilot version is seen in **3**. It consists, basically, of a large and a small flask, one above the other with the larger uppermost. The lower flask contains oil which is decanted by inverting the whole assembly into the larger flask containing steel balls and rollers. On inversion the oil is suddenly exposed to a vacuum which, together with the spread of the oil in a film over the balls and rollers allows the air contained in it to come out of solution very rapidly. Measurements of pressure and temperature enable the percentage of the air content to be computed.

After each test the apparatus has to be dismantled for cleaning and it was in this respect that the pilot model was unsatisfactory. For instance a good many screws had to be unfastened before dismantling and if for any reason the screws were not securely replaced the apparatus leaked, making accurate readings impossible. To overcome these limitations, a permanent apparatus which was easy to operate and maintain and which incorporated the high level of performance already established was developed, **6**.

The main components of the new apparatus are retained in position by a single three-handled swape at the top of the assembly which enables it to be dismantled easily, **4**, and without the need for spanners. The flask, and its internal components, **5**, are mounted on a cantilever trunnion from an L-shaped support stand which is cut from a single sheet of steel, folded into shape and welded at the join. The pressure leads of transparent, tinted PVC beer hose are taken from the flask through the hollow boss of the trunnion and carried down the centre of the stand.

The apparatus was designed by Donald Firth and made at the Mechanical Engineering Research Laboratory. Arrangements for its manufacture have now been made with F. W. Baggett & Co Ltd, of Wolverhampton.

3



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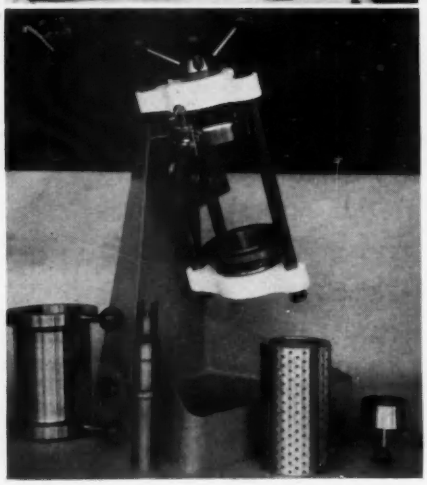

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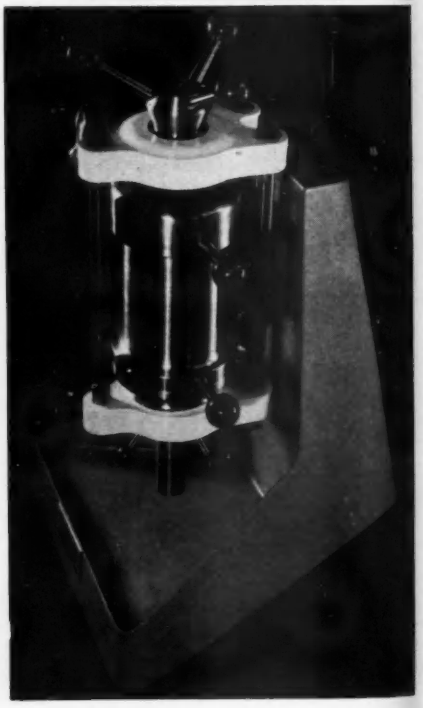

NEWS

PEOPLE

Barnett Freedman

Few men of the world, let alone someone as unworldly as Barnett Freedman, can have won so many loving tributes in the obituary columns of 'The Times' and few can have so well deserved them: "What a rare jewel was he! So shining was his personality, so brave his spirit, so outrageous his prejudices, and so glorious his wit, so friendly his eye and so scornful his disapproval"; "Barnett was indeed a person – not a personage, not a dignified figure dressing the part of the artist who has 'arrived'.

"Small in stature, pungent in conversation, he had the wit of the cockney and the deep kindly sympathy of his

Barnett Freedman

race"; "He could be deliberately provocative and aggressive, and took a delight in shocking the complaisant or the smugly respectable"; "He was always tilting at the windmills that he loved"; "Without apparent attachment to any dogma he possessed an absolute faith and optimism in the future which were near obstinate"; " . . . a frail, animated, ugly and lovable figure, with parchment cheeks, eyes boring out through steel-rimmed glasses, mouth curving impishly over the stem of his narrow-bowled pipe as in his cockney voice he tossed controversial ideas out into the middle of the room and leaned back to watch the result"; "He was a rare artist, who not only understood and accepted the practical needs of industry and the limitations and possibilities of lithographic printing, but through his curiosity about everything he had to do with was sometimes able to initiate changes in industry and printing themselves"; "Barnett Freedman was one of the best lithographers of his generation, and he did perhaps as much as any other single artist to give the process new vitality."

"Throughout his career he was a courageous fighter, both in his own work as an artist and on behalf of any young artist or student who interested him and whom he could help"; "No one, either as a member of the staff of the Royal College of Art, or of its council, . . . can have done more than he to stimulate and, in need, to comfort and support his colleagues and his students."

So wrote his friends and colleagues. And when he was buried on a cold, blustery, January morning, the synagogue was packed from wall to wall, and even the forecourt too, by those who had come to mourn him.

Alec Hunter

Alec Hunter was loved and respected by all who knew him. His death is a grievous loss to his friends and to the design profession which he served with great wisdom and unsparing energy.

He was a designer with that absolute integrity which springs from a craftsman's understanding and love of his material and a scholarly appreciation of its deep traditional roots.

Alec Hunter worked first with his father: they were weavers at Haslemere in Surrey and then at Letchworth; later he worked for Edinburgh Weavers until 1932 when he joined the firm of Warner & Sons Ltd, at Braintree. There he found a working atmosphere which matched his own inclinations, a handsome factory where the production of fine traditional silk brocades continues alongside creative experimentation. At Braintree he was able to draw to him other designers of equal ability, and selflessly to provide the technical experience which made it possible also for others to produce fabrics of great beauty.

His conviction was always that only the best results were worth working for, whether the task was the production of silk and nylon parachute fabric during the war or the rich brocade which decorated Westminster Abbey for the Coronation.

Alec Hunter willingly accepted the responsibilities of public life which arose from his reputation as a designer of great talent, experience and understanding. He was for several years visitor to the weaving department of the Royal College of Art and was last year appointed to its governing council. But, above all, he

Alec Hunter

gave his time and energy with unstinted enthusiasm to his own professional body, the Society of Industrial Artists. He was a member of council for many years and, for the last 18 months, its president.

In that high office his calm wisdom and sensitive appreciation of the problems of designers in fields of practice other than his own earned him the respect and admiration of all who worked with him. His quiet dignity at council meetings calmed even the most excited member to the state of mind in which rational decisions could be taken.

The society will be fortunate indeed if it is ever again guided by so excellent a president; the textile industry has lost one of its most distinguished designers, and all of us who mourn his death have lost a friend whose place we shall find it impossible to fill.

MISHA BLACK

Sir Herman Lebus

I got to know Herman Lebus fairly well during the war as we were both members of three Board of Trade committees. Although his approach to furniture making was not mine, I came to respect his views which were always worth listening to. He had a sense of responsibility to the trade as a whole and when he took me round his factory I had no doubt that he wished to be a good employer. The large business founded by his father was developed by his own foresight and drive. He had a remarkable knowledge of furniture making in Europe and America and he lived through a period which witnessed a great stimulation in demand in the mass market mainly from better pay and housing for working class people and the introduction of hire purchase. By good organisation, accurate machining and wide distribution his firm succeeded in making hard-wearing furniture available at a low price. The 'Link' range, when introduced, set a higher standard of design.

The business, I felt, was his life. Even during the last few years when he was anything but a fit man, he drove himself hard, partly from a sense of duty, partly from habit, but even more, I thought, because he feared leisure and dreaded that it might be imposed upon him by ill health. His clear brain, his lifelong experience and his activity, coupled with his prestige as chairman and managing director of the largest furniture factory in the world, leave a gap in the furniture trade which it will not be easy to fill. G.R.

Lethaby professor

Dr Steen Eiler Rasmussen, the Danish architect, has been appointed Lethaby Professor of Architecture at the Royal College of Art in succession to Basil Ward.

Dr Rasmussen, who holds the chair of architecture at the Royal Academy of Arts, Copenhagen, was appointed an honorary RDI in 1947 and was elected an

Steen Eiler Rasmussen

honorary corresponding member of the RIBA. In 1953 and 1954 he was guest professor of architecture at the Massachusetts Institute of Technology and at Yale respectively.

Dr Rasmussen is perhaps best known to this country for his books – 'London: the unique city' and 'British Applied Art'. His latest book 'Experiencing Architecture', is being published in USA later this year, and the subject of his five lectures which started on February 24 until March 24 is 'Experiencing Architecture'. The Lethaby chair of architecture commemorates W. R. Lethaby who was the first professor of design at the Royal College of Art from 1900–18. The lectures will be held at the RIBA at 5.30 pm. Admission is by invitation; all enquiries should be addressed to the Registrar, Royal College of Art, London SW7.

American office in London

Charles Butler Associates, the American firm of industrial design consultants, has recently opened a

continued on page 69

Offices and Board Rooms

Church, Library, Laboratory, Office and School Furniture and Fittings.

The illustration shows the combined Board Room and Managing Director's Office of the Engineering and Electrical Equipment Co.,Ltd., designed and made by HAMMERS. Desks, Conference Table, Filing Cabinet and Panelling in Australian Walnut. Chairs upholstered Vaumol Hide. We are Specialists in furniture and joinery for special needs, to Architect's designs or through our own Design Department.

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Quotations for reprints of articles and features in DESIGN *may be obtained from the Business Manager,* DESIGN, 28 *Haymarket, London* SW1. *Orders should be placed not later than the end of the month of issue.*

NEWS

London office at 18 Cavendish Square, W1. The new office will be managed by Robert J. Price, who has transferred from the New York office. The firm's work in this country will be concerned first with design for various fields of transportation and then with consumer product design.

Charles Butler is perhaps best known as a designer of aircraft interiors and his work on the 'Viscount', 'Britannia' and 'Comet' aircraft for several American air lines, together with his designs for the British firm of Hunting Clan Air Transport Ltd were the subject of

Charles Butler

a note on page 24 of DESIGN for October, 1957. Mr Butler has pointed out in respect of this note that it appeared rather as though he was responsible also for the 'Comet' lounge mock-up shown at Farnborough last year and illustrated on page 73 of DESIGN for December, 1957. This of course is not so, the 'Comet' lounge was designed at de Havilland's.

Designs of the Year

Following the successful precedent in 1957, the CoID announces that the 'Designs of the Year' awards are to become an annual event and a regular feature of The Design Centre's programme.

The announcement of the chosen products and their display in The Design Centre will take place on May 8, when HRH the Duke of Edinburgh will again visit the Centre and present certificates to the manufacturers and designers of the 20 products. 'Designs of the Year' will be featured in the June issue.

Showing in Holland

At the 'Utrecht Fair' March 18 – 27, the CoID in co-operation with the Board of Trade, will present more than 300 items chosen from 'Design Review', the index of well designed goods at The Design Centre. As well as furnished schemes there will be separate displays on the stand designed by Robert Wetmore.

EXHIBITIONS

Trade fairs

UK

APRIL

16 – 25. Instruments, Electronics and Automation Exhibition, Olympia. Apply: Industrial Exhibitions Ltd, 9 Argyll Street, London W1.

25 – 29. Seventh Electrical Engineers Exhibition, Earls Court. Apply: P. A. Thorogood, 6 Museum House, 25 Museum Street, London WC1.

MAY

7 – 17. Mechanical Handling Exhibition, Earls Court. Apply: Mechanical Handling, Dorset House, Stamford Street, London SE1.

12 – 21. Fifth Gauge and Tool Exhibition, Olympia. Apply: The Gauge and Toolmakers Association, Standbrook House, 2–5 Old Bond Street, London W1.

Students design stand

This exhibition stand for Woodsons of Aberdeen at the 'National Boat Show', Olympia, was designed by two students, Edward Swan and Robert Corsie. Mr Swan and Mr Corsie are both post-graduate students at Gray's School of Art, Robert Gordon's Technical College, Aberdeen, and they received their diplomas in interior design last year.

Europe

The Brussels Universal and International Exhibition will be held from April 17 – October 19. General Enquiries: Office of the United Kingdom Commissioner-General, Universal and International Exhibition, Brussels 1958, 83 Baker Street, London W1.

MARCH

13 – 23. International Motor Show, Geneva. Apply: Secretariat-General, Place du Lac 1, Geneva.

14 – 23. Finnish Industries Fair, Helsinki. Apply: The Finnish Fair, Mannerheimintie 17, Helsinki.

APRIL

April 24 – May 15. Twenty-second International Trade Fair of Handicraft Products, Florence. Apply: Mostra-Mercato Nazionale dell Artigianto, Piazza Della Liberta 1, Florence.

MAY

3 – 16. Third 'Drupa' International Printing and Paper Fair, Dusseldorf. Apply: John E. Buck & Co Ltd, 47 Brewer Street, London W1.

10 – 25. Fifth International Congress and Exhibition on Electronics and Nuclear Energy, Rome. Apply: Rassegna Internationale Electronica e Nucleare, Via della Scrofa, 14, Rome.

Overseas

MARCH

February 27 – March 22. Australian Industries Fair, Melbourne. Apply: Victoria Chamber of Manufacturers, 312 Flinders Street, Melbourne, C1.

APRIL

19 – 27. Third International Home Building Exhibition, New York. Apply: Robert A. Durk, Exposition Managing Director, 250 West 57th Street, New York 19, NY.

MAY

7 – 17. Second United States World Trade Fair, New York. Apply: A. P. Wales, British and Commonwealth Office, 36–8 Southampton Street, London WC2.

26 – 30. Twenty-seventh National Packaging Exposition, New York. Apply: Clapp & Poliak Inc, 341 Madison Avenue, New York 17, NY.

May 30 – June 8. International Trade Fair, Montreal. Apply: Montreal International Trade Fair Ltd, 1600 Berri Street, Suites 227–8, Montreal.

Paris fair

The SIA has been invited to participate in 'Le Foire de Paris' to be held from May 10 – 26. L'Institut d'Esthetique Industrielle was invited to prepare an international exhibition of product design, and it in turn invited the SIA. The organisation is being conducted by the engineering products group of the SIA. The final selection of products, all of which must be mass produced, has already been made.

REPORTS & CONFERENCES

Retailers' conference

The British Institute of Management recently published in book form the papers read at its annual retail management conference in March of last year. The theme of the conference was 'Planning for Progress in Retailing' and a paper on 'The retailer's responsibility for design' read by Sir Gordon Russell, director of the CoID, is contained in this book. 15s, from Management Publications, Management House, 80 Fetter Lane, EC4.

Rural industries

The Rural Industries Bureau has recently issued its annual report for country industries. The report deals with the activities of the Rural Industries Bureau under various headings, which include engineering, woodworking, clay industries, basketry, saddlery and Welsh textiles. The publication also includes the bureau's costing service and marketing service, together with a statement of accounts and reports of the conferences it held during the year 1956–7. 1s 6d from Rural Industries Bureau, 35 Camp Road, Wimbledon Common, SW19.

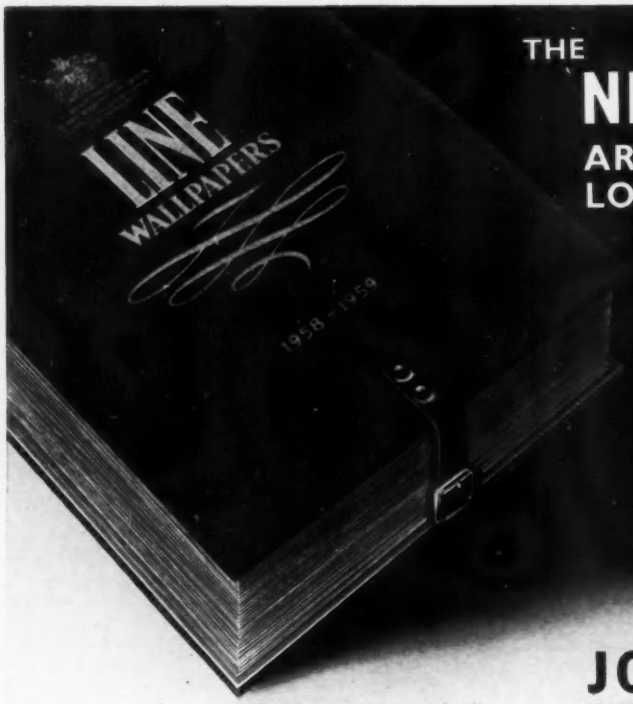
Holland on film

The film 'Made in Holland' stresses the importance of design in Holland today with particular emphasis on the international aspects – Holland imports from abroad much that is well designed and herself produces goods of equal merit. While the colour in the outdoor sequences is extremely attractive (Flemish reds and browns), individual items tend to be less clear in detail; but the film would make a good general background to any discussion on the needs of the Common Market. The importance of packaging in a free market is particularly well apprehended. Enquiries for loan, the Press Department, Royal Netherlands Embassy, 38 Hyde Park Gate, SW7. S.R.F.

Conference on housing

A one-day conference is to be held at the RIBA on May 2. The title of the conference is 'Design Pays' and it is the proposal of the Town and Country Planning and Housing Committee, designed to bring together

continued on page 71



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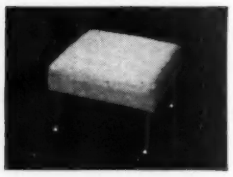

The Flamingo chair has beautiful clean lines, mahogany legs and a back that supports you firmly but kindly, lets you relax — even when you're sitting upright! Settee and footstool to match.

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PRINCIPAL: E. E. PULLÉE, A.R.C.A, F.S.A.E

architects, builders and building societies to discuss the design of private housing. Among those taking part will be Sir Hugh Casson, Eric Lyons and Paul Reilly, and the conference will be opened by the Minister of Housing and Local Government.

Aspen 1958

Dr Albert E. Parr, director of the American Museum of Natural History, New York, has been named chairman of the executive committee for the eighth International Design Conference at Aspen, Colorado to be held in June.

The theme for this year's conference is the relations between the various fields of design, and between those fields and the problems presented to them by society. Saul Bass, the designer, will be one of the advisors to the executive committee.

MISCELLANEOUS

Atomic light

Several American railway companies are experimenting with atomic lamps in their search for more efficient signal and warning systems. The lamps use Krypton, a radioactive gas which reacts with treated phosphor crystals which coat the inside of the lens. This reaction creates light. It is estimated that the lamps will operate for more than 10 years without maintenance.

Changes of address

The lamp and lighting factories in the AEI group have been transferred from the ownership of the British Thomson-Houston Co Ltd to AEI Lamp and Lighting Co Ltd. The headquarters of the company has also moved from Rugby to Melton Road, Leicester, where its new building is nearing completion.

ASID, the American Society of Industrial Designers, has moved its premises from 48 East 49 Street to 15 East 48 Street, New York, 17.

Ball point pens

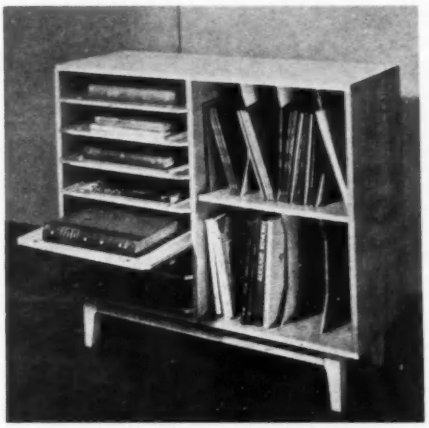
The 'Scripto' pen, with a retractable ball point, originally produced in America, is now being manufactured for the British market by Scroll Pens Ltd, Lockfield Avenue, Brimsdown, Enfield, for a retail price of 2s 6d. The pen, produced in four different colourways, is sturdy and has shown good reliability after six months' continuous use.

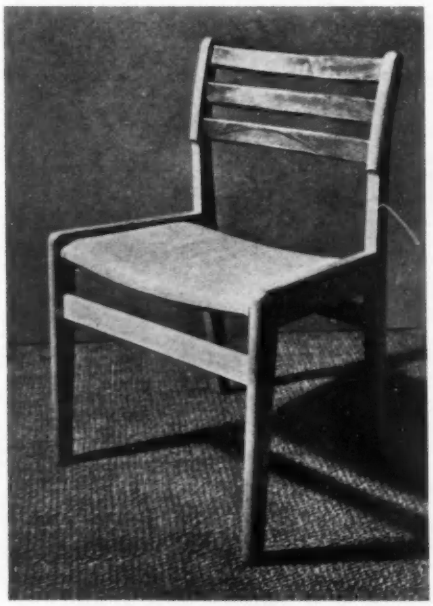
Another recently introduced retractable ball point pen is the 'Triomatic' made by Golmet Ltd, which instead of having a single refill has three; red, blue and green. A colour is selected by pushing down a slide on the body of the pen and released by pushing either of the other two slides. The body is in metal with a nickel-chrome finish and the pen retails at 15s.

Furniture for schools

The LCC has produced a handsome catalogue of school furniture with an ingenious loose-leaf binding. So far as is known, this is the first such catalogue produced by an education authority anywhere in the world, and is therefore especially to be commended as an endeavour to relate the varying (and sometimes conflicting) requirements of supply, maintenance and user.

The sections of the catalogue are divided into operational categories: storage, working surfaces, combined storage and working surfaces, seating and miscellaneous.





Three designs showing LCC school furniture, TOP; A10, *atlas and folio cabinet in beech;* MIDDLE; B5 *art/easel desk in beech, birch ply and tubular steel;* BOTTOM; D6, *library chair in beech and mahogany.*

Although the LCC is one of the authorities which have done a considerable amount of research into appropriate seating heights for children, this has, as yet, had no effect on the furniture illustrated. Chairs, D1, 3 and 6, are 17 inches high, and D7 is 18 inches. Certainly D3 is a fixed auditorium seat, and D1 a stacking chair for hall or dining use, but D7 is a chair for classroom use. Neither it, nor the related table, B7, is particularly attractive in appearance, and it is to be hoped that when furniture is produced in accordance with anthropometric findings it will be nearer in quality of design to the best examples illustrated in this catalogue. The library chair, D6, on the other hand, although high, is extremely attractive.

From the point of view of safety, the policy of having book lockers, A7, in such large blocks is questionable – the prospect of 45 children congregated against a 15-ft bank of lockers offers 'St Trinian'-like possibilities.

Some of the best examples are the related units – the various types of benches and storage units for science rooms, C3–6, and art and crafts rooms, C8–9, and the housecraft units, C1–2. The art easel/desk, B5, is an attractive and useful design, as is the book trolley, E1.

Catalogue from booksellers, or direct from County Hall, London, at 15s (postage extra). S.R.F.

Library for designers

The library of the Cotton Board Colour, Design and Style Centre in Manchester has recently been redesigned by Robert Nicholson. The library, intended to provide sources of stimuli to textile designers, has now over 100,000 fabric samples, over 800 books, and 150 magazines from all parts of the world.

Some of the subjects covered in the library are European painting and sculpture, Pre-Columbian and Oriental art, architecture, interior decoration, graphic art, advertising, fashion, textile design and so on. Books cannot be removed from the library, but visitors are welcome to work from them on the premises.

Consumer protection

New legislation recently came into force to help consumers buying goods on hire purchase so they can see exactly what terms are being offered by the retailer. Under the Advertisements (Hire Purchase) Act, 1957, traders advertising hire purchase schemes are obliged to set out in full all the particulars of the scheme in their advertisements. They must state, in addition to the cash price, the down payment, the instalments (how much and how many) and period of payment, and they must not draw undue attention to the more immediately attractive items in the terms.

BS 1308:1957 concrete lighting columns

This could be regarded as an example of the ideal BS. Unlike so many others published recently, no attempt has been made to design the product's appearance or detail, and it is confined to laying down the manufacturing requirements for columns.

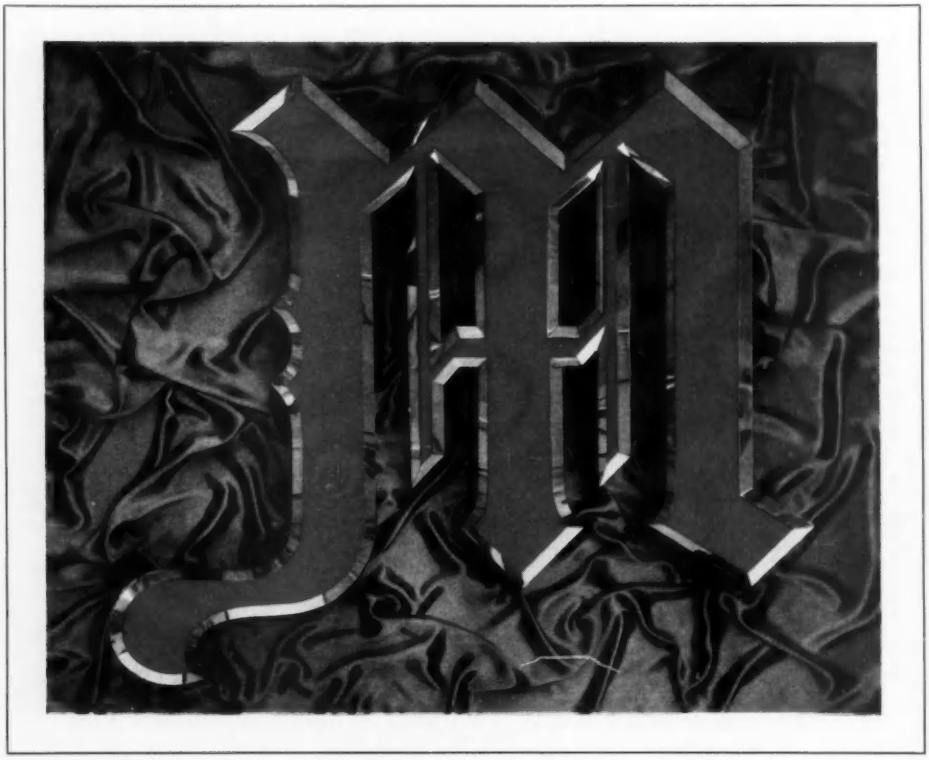
Originally published in 1946, this BS has been extended to include prestressed concrete and its special requirements, and is confined to columns classified in the Code of Practice 1004. It is divided into the two

continued on page 73

EMBASSY

CLASSIC

AN EXAMPLE OF ARCHITECTURAL ILLUMINATED LETTERING BY PEARCE



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main groups, with mounting heights of a nominal 25 ft and 15 ft.

It is a little disappointing that it still suggests that the base chamber, which is so important in determining the size of the column shaft, must of necessity be a bulky compartment. The minimum wall thickness allowed results, when applied to the smallest compartment recommended, in a base dimension that is greatly in excess of that desired visually or mechanically. Special sizes are permitted by arrangement however, and attention is drawn to the fact that the base dimensions should be kept as small as possible. The requirements of the reinforcement, whether plain reinforced or prestressed, are well covered, and the temptation to go into structural design has been avoided. Adherence to this specification will undoubtedly result in the manufacturing of a sound, but not necessarily appealing column. PETER WHITWORTH

BS 1308:1957, available from BSI, 2 Park Street, W1, 5s.

Describing man made fibres

A new British Standard, BS 2935:1957, tackles the difficult problem of accurate and informative labelling of fabrics made from man made fibres. The simple principles involved are that the fibre present in greatest proportion should be named first and that proportions less than 15 per cent should be identified by their actual percentage if the fibre is referred to at all.

The purpose of the recommendations is to prevent the public from being misled, eg a fabric containing over 50 per cent of rayon with more than 15 per cent of nylon would be properly described as a rayon/nylon fabric. The reverse order of words nylon/rayon would be misleading. Similarly, if a fabric contains only 5 per cent of 'Terylene', then the word 'Terylene' should only be used if the actual percentage of the fibre is given.

One aspect of the standard which calls for comment is the lengthy list of generic names and matching trade marks for man made fibres given as an appendix. The range of man made fibres with their varied properties is now so wide that the housewife will have to be very knowledgeable if she is to derive full benefit from the new labelling recommendations.

BS 2935:1957 costs 2s 6d. DAN JOHNSTON

New design consultants

The Design and Industrial Styling Company, 15 Moray Place, Edinburgh, was formed in January. Henry Wylie has been engaged as full time consultant to the company, which has already carried out work on ships' interior fittings for the firm of Thermotank Ltd, heating and air conditioning engineers. DISC has also redesigned certain products and established new designs for Lumenated Ceilings Ltd, London, and for 'Arnoplast', Glasgow. It is expected that a wide range of industries in Scotland will avail themselves of the services of this new organisation, which is the first of its kind to open north of the border.

This month's cover

This month's cover has been designed by Ruth Gill. Miss Gill studied at Chelsea School of Art, when Henry Moore, Graham Sutherland and Milner Gray were teaching there. During the war she worked on ATS recruiting with Hans Schleger at John Tait and Partners where she subsequently became art director. She is now an art director at Colman, Prentis and Varley Ltd where she has been responsible for such accounts as Jaeger, Fortnum and Mason, Pepsi-Cola and Charnos.

LETTERS

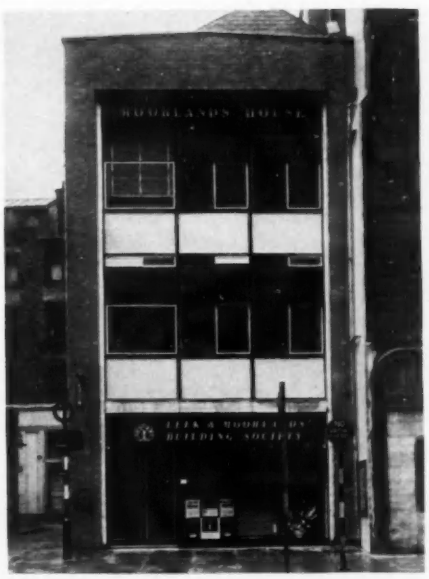
LETTERS *to the Editor*

The human element?

Certain statements made by J. Christopher Jones in his 'Automation and Design' series are criticised in the letter below by F. C. Ashford. We invited Mr Jones to reply to these criticisms which resulted in the following interchange of correspondence:

SIR: Leaving aside the conflicting possibilities suggested by Mr Jones in his current series of articles on 'Automation and Design' and the somewhat illogical conclusion he seems, so far, to have drawn, he misleads his readers on two important points.

He states that styling and intuitive designing are being replaced by ergonomics and logical analysis, and while there is no case for superficial 'styling' he suggests a general situation which is neither true nor desirable. The satisfaction of ergonomic principles does not automatically imply the achievement of any aesthetic quality, since ergonomic design is only functional design, which we know is not sufficient. Whether logical analysis can deal satisfactorily with aesthetic and emotional values seems to me to be a highly debatable point.



New style

The district office of the Leek and Morlands Building Society in Manchester shows a welcome change from the usual mock styles that these organisations seem to favour. The architects of this and the Shrewsbury office are Morrison and Partners.

Mr Jones also states, 'Automation and Design 3' (DESIGN October 1957 page 44), that a computer may be used "to try out and predict the consequences of using any of a large number of possible designs, so that the correct shape can be discovered with certainty". If by "correct shape" he means an aesthetically satisfying shape this claim is misleading. Computers can only deal with mathematical values and how often does a designer find that he can use a mathematical formula such as the 'Golden Section' or the 'Fibonacci Numbers', even assuming their validity, in the solution of three dimensional design problems?

Failing any other reduction of aesthetic or emotional values to mathematical formulae, what can be put into a computer to ensure that something other than cold logic comes out? Cybernetics, ergonomics, logical analysis and other new sciences and techniques must be recognised as having a part to play in the design of articles for human use, but in assessing their value we should retain our sense of proportion – be it only intuitive.

Imagine the emotional plight of the inhabitants of Mr Jones' prophetic world struggling gamely through the long leisure hours in search of culture and the development of aesthetic feeling, while surrounded by objects of which "the design is as automatic and as uninteresting as the water supply".

F. C. ASHFORD
Royal College of Art, SW7

MR JONES REPLIES:

"F. C. Ashford objects to several statements made in the Automation articles because they conflict with his belief that 'functional design . . . is not sufficient' and lacks 'aesthetic quality'. I do not share this belief. I like functional design, wish there was more of it, and suspect that there will be as production grows more automatic.

"Can Mr Ashford give us some examples of functional design? Is he thinking of such things as water pipes, trumpets, seashells, leaves, propellers, radio valves, hands, eyes, pencils and balls of string? The shapes of these things have been evolved by the 'cold logic' of trial and error without any thought for 'emotional values', but they can hardly be said to be 'insufficient' or lacking in 'aesthetic quality'.

"But Mr Ashford may not call these things designs. He may reserve that title for things that not only do a job but also convey a message, as does that vehicle-cum-prestige-symbol, the modern motor car. The trouble with designs of this kind is that they never can be functional; they can only be semi-functional because they have two conflicting purposes; that is why the modern car is an inadequate vehicle and symbolises a performance that it cannot provide.

"The value of ergonomics, logical design methods, computers and so on, is that they could be our equivalent of the slow evolution by trial and error that gave form to such functional and traditional designs as the rowing boat and the farm wagon. Shapes that are so closely matched to functional requirements leave little place for conscious injection of emotional values, but are of a far greater quality than our present domestic utensils which do.

"I hope the fourth article in the series (DESIGN December 1957 pages 50–55), showed that the

continued on page 75

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prophetic world which Mr Ashford so charmingly describes is not likely to come about."

MR ASHFORD: THE AESTHETIC OF FUNCTION

"To evade the two main points of my criticism Mr Jones adopts the time-honoured device of the wordy smoke screen over which he lobs volleys of counter criticism.

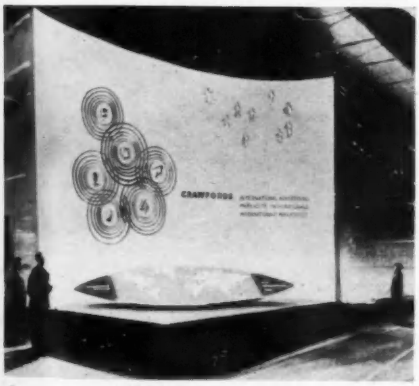
"While declining the invitation to become entangled in his web of water pipes, trumpets and balls of string, I will explain what I mean by functional design not necessarily being synonymous with aesthetic quality.

"I did not, as he implied, say that aesthetic quality was not compatible with functional design, but that it is not automatically guaranteed by the satisfaction of functional requirements.

"Perhaps I should define what I mean by the term 'functional design'. I have always felt that it must imply some aesthetic content, without which many things could not fulfil their functional role, but from Mr Jones's arguments I have taken his conception of the term to be confined to strictly mechanical and structural efficiency and have therefore held to that conception throughout these arguments.

"I will take one of the examples quoted by Mr Jones, the farm wagon. When it was found by sweeping up the front of the floor and slightly narrowing the waist that the front wheels could be locked round further and the vehicle made more manoeuvrable, the lines, particularly of the upper part of the body, assumed an attractive sheer not unlike that of a ship. Yet the functional requirement could have been met, perhaps more easily, by taking up the sides in a flat rise commencing just far enough in from the tail to prevent overhung loads from tending to slide aft.

"This sheer, which contributes so much to the aesthetic quality of the wagon was not therefore imposed by the functional requirements; instead I suggest that it was imposed by that thing from which Mr Jones shies like a frightened horse, emotion.



Agency at exhibition

The only British advertising agency with a stand at the 'Brussels International Exhibition' is W. S. Crawford Ltd. The illustration above shows a perspective of the stand, which was designed by Sir William Crawford and Partners. It features an illuminated map in 'Plyglass', showing W. S. Crawford's offices and the offices of its associate companies in different parts of the world.

"The wagon builder was a countryman, living among trees and timber and acquiring through constantly observed patterns of natural growth a consciousness of form. Although he may not have been aware of it, he also acquired a sensitivity in the employment of form and a flat rise on the sides of the wagon would have offended his eye.

"Looking farther afield we might ask why were the clipper ships designed by Fife invariably more aesthetically satisfying than many other equally efficient vessels by his contemporaries? Why are some ocean racing yachts better looking than others, though designed within the same close rulings?

"In short, what distinguishes all outstanding design from other design of equal functional efficiency but sensitivity, which can only be conferred by the designer, and what is sensitivity in human beings but a capacity for emotional response?

"In admiring the farm wagons and the rowing boats Mr Jones is in fact admiring something which he appears willing only to recognise in connection with superficial styling or designing for fashion or ostentation.

"Is he not somewhat confused?

"Having endeavoured to reply to his counter criticism, I ask him for a straightforward reply to my two main points of criticism.

"Can he show us how a computer can discover a *correct* shape with certainty, and how exact methods of design, which he claims are *replacing* intuitive methods, can ensure aesthetic quality?"

MR JONES: PERFORMANCE AND APPEAL

"Mr Ashford is fearful of exact design methods with good reason. They do indeed limit the scope for the kind of designing by appearance to which he refers and to which we are all accustomed. The possibility of finding, by a kind of visual magic, shapes that not only satisfy functional requirements but have the power to evoke a particular emotional response becomes less and less as functional requirements become more exact and more detailed.

"When, as at present, design information is scanty, performance requirements are low and are only a rough guide to shape. Under these circumstances there is both scope and need for the visual magician to make up for low performance by adding emotional appeal. When information is abundant, as it will become when electrical information channels replace paperwork and drawings, there will be little scope for the visual magician because many of the shapes he would like to use will not meet the more precisely stated performance requirements. There will be little need of his magic because the high performance will itself give adequate satisfaction.

"A close reading of George Sturt's book 'The Wheelwright's Shop' suggests that, if it were possible to collect all the information which was built into the shapes of farm wagons over centuries of trial and error, it would be found that each feature, such as the curved body, was governed not by one factor, as Mr Ashford suggests, but by many. Sturt calls this 'the interaction of parts' and gives, as an example, half a dozen reasons for dishing the wheels of a wagon. No doubt any one of these requirements could be met by some such crude alternative as Mr Ashford's 'flat rise', but only the more complex shape of a dished wheel can meet all the requirements together.

"Mr Ashford asks how a computer can discover a correct shape with certainty. It will do so as does any calculation – by predicting that the performance is correct, ie within the prescribed limits. He also asks how exact methods can ensure aesthetic quality. They are not intended to do this; they are intended to ensure high performance. Mr Ashford can see for himself what aesthetic qualities may or may not be acquired in this way by looking at such examples as I mentioned in my first reply."

Design for convenience

A view of part of 'The Age of Convenience' exhibition which the CoID Scottish Committee is holding at its headquarters in Glasgow until March 15.

BOOKS

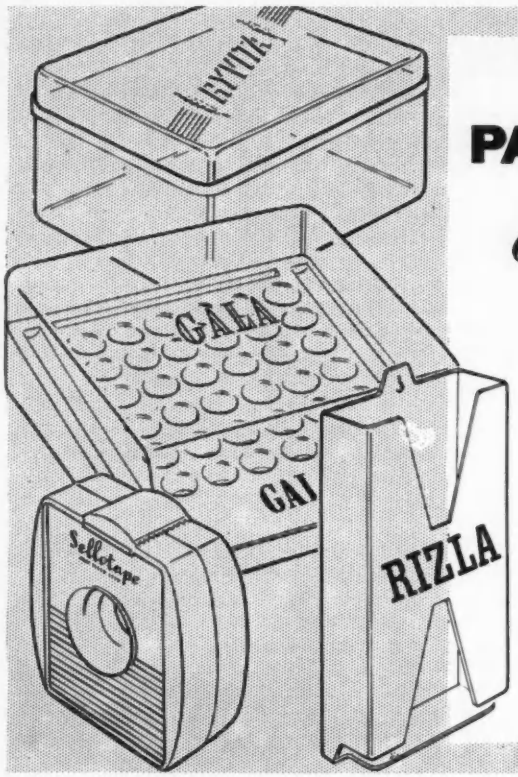
Designers in Britain volume 5

Edited by Herbert Spencer, André Deutsch, £3 5s.

Is 'Designers in Britain' (the biennial review of industrial and commercial design) too conscientious a listing of the work of too many designers? The liking and the respect I have for British quality and tradition and the will to get rid of those traditions, which are only conventional concepts, have made me look first for some editorial or typographical reason why the content of this book gives a slightly pale impression. It may be that this is due to the fact that I have a fixed reference point for comparison which is the artistic fighting spirit and the gay atmosphere of the Festival of Britain, which now has changed into the more important and harsher atmosphere of everyday work.

We have been spoilt during the last few years with design publications which, in an often one-sided selection have cultivated a personal line, or which in dramatic pictures have formulated a thesis of design which has forced itself upon the reader with great suggestiveness. I have often reacted against 'design for photography' which is frequently demonstrated, and also against the great distance between that kind of visual excellence and the kind which everyday living demands of good design. A book like 'Designers in Britain' can hardly achieve this quality after the special committees and the final jury have made their choices, but Herbert Spencer has worked carefully on the difficult task of compiling a reference book which

continued on page 77



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component furniture

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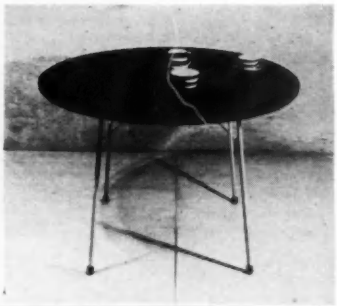

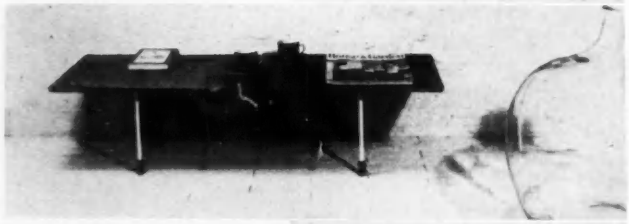

component furniture is widely used for exhibitions, shopfitting and display work generally, where the size and colour ranges are of particular value. It is available only direct from the manufacturers, J. Scott Smith Limited. If you would like the complete range of catalogues please write to them at

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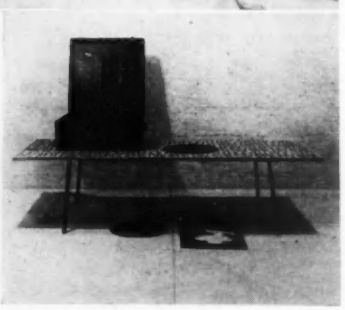

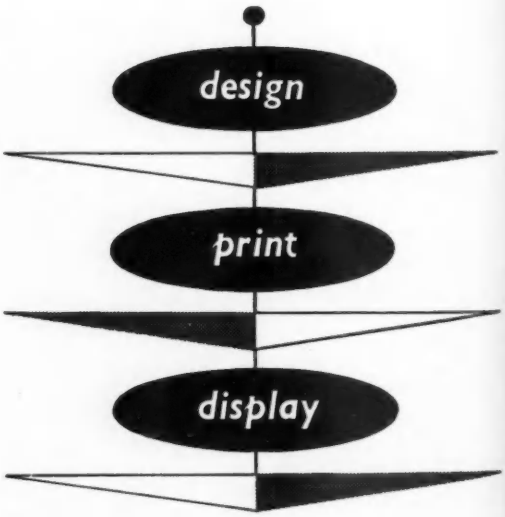

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BOOKS

should be useful particularly to industrialists seeking designers for their products.

What impresses a Swede is the width of the selection and that design is a reality both in industrialised craft and in mass production from textiles to transport equipment, and machines to menus. As such, the book is an imposing testimonial of how many fields have been conquered by design in Great Britain. As a foreign reader I look in this book for what is British – although at the same time I am conscious of the fact that most of the habits and goods of the West are becoming common to all and therefore that their design rightly is becoming international. However, goods which are technical and anonymous, for instance, industrial equipment, have a solidity and balance which one would like to think of as typically British.

The furniture illustrated is more exquisite than that of five or six years ago, but its design, as is also the case with lighting fittings, is playing a little too consciously on Italian or Danish-Scandinavian themes. Woven textiles have a more domestic character and the printed ones are more modern and less traditionally conventional. Glass and pottery are so little represented that they evade judgment. Strangely enough it seems as if exhibition and display design has got stuck in a kind of module-routine. But one only has to turn the page to packaging to be put in a good mood; what skill and sense developed here and what a delight it is to see the humour, genuine artistic observation and unaffected typography that go into so many British package designs. ARTHUR HALD

Lettera

Armin Haab and Alex Stocker, Arthur Niggli and Willy Verhauf, £2 2s

This book with a brief introduction in three languages is sub-titled 'a standard book of fine lettering'. This is a very considerable over-statement. It consists mainly of Victorian decorated types and hand lettering by one of the authors, Alex Stocker. One or two pieces by Mr Stocker are so illegible they require a reference to the index, but nevertheless they are all inventive, stimulating and often amusing and had the authors simply issued a booklet of Mr Stocker's designs we should have no complaint to make.

It is the early part of the book that is so disappointing with its lip-service to the classical and everyday forms. It opens with the inevitable classical Roman capital, traced or copied so feebly that the life of the original has evaporated, followed by an equally debased Black Letter. The two pages devoted to Baskerville appear to be not Baskerville at all but a later design, and enlarging Monotype Garamond, and re-grouping Arrighi's noble capitals are perhaps not very helpful. Max Caflisch's fine 'Columna' type is indeed present and some flourished capitals from Lucas, but not one specimen of the lower-case chancery hand. The book in fact attempts to cover far too much ground.

There must be some way of reconciling the fine forms of the revival of Edward Johnston and the exuberance of the Neo-Victorians. As it is both sides seem to drive each other into excess, excess of dead archaising on one hand and wild illegibility mixed with cribbing the smarter modern painters on the other. Or possibly the authors have never heard of Johnston and Eric Gill and are simply reacting against the Bauhaus and functionalism. Apart from that it seems reasonable that a letterer should appreciate the alphabet in its finest and most legible form and not regard its distortion as a kind of apotheosis. By reaction this book may inadvertently help him to do so. REYNOLDS STONE

The concise encyclopedia of English pottery and porcelain

Wolf Mankowitz and Reginald G. Haggar, André Deutsch, £6 6s

This encyclopedia is aptly titled 'concise', but it has in no way been skimped. It is a stimulating book, generously illustrated by black and white and richly coloured photographs.

The object of the encyclopedia is to give a summary of reliable information for the collector or dealer in ceramics. The authors have made a point of avoiding guess work and supposition and have concentrated on factual information. Much of this has been obtained through such sources as early topographical histories, diaries, parish registers and contemporary newspapers etc. The result is a book which is fascinating, not only to the professional or amateur collector, but to anyone remotely interested in ceramics.

The short histories of the potters, the dictionary, the excellent illustrations, make it a pleasure to idle through the pages, and to me not least interesting were the many charming designs of back stamps.

Personally, I do not think the examples of modern pottery have been well chosen or that they are representative of the best the potters are turning out today. This seems a pity as there is so much to compete against in the illustrated examples of past periods.

It is certain that pottery manufacturers will want to own this book and they will feel a justifiable pride in the work representing their industry in the past. It should also be an inspiration to guard and live up to the standards set by their ancestors which are delightfully presented in this latest encyclopedia.

A. GARDNER-MEDWIN

A world of pattern

Gwen White, John Murray (Publishers) Ltd, 18s

A recent series of wallpapers (Hammer Prints) has featured textured effects in black and white based on natural phenomena (rock-strata, coal-face and such like), inspiration for which might have been found in the new book, 'A World of Pattern', by Gwen White. This is one of its happier features for this book opens a window on to the wealth of pattern to be found in nature, whose orderliness both symmetrical and assymmetrical, is also profusely exemplified.

Valuable as it may be as inspiration for the primary school teacher or for the young art student, the book suffers from insensitive drawing, from conventionalisations in the uninspired idiom of 25 years ago and in the use of rather unattractive colours. There is no attempt made to relate pattern-making to any of the elementary printing processes (potato or lino-cuts) which might have done something to end the tedious drawing and painting of repeat patterns which serve as 'design' in the curriculum of so many art teachers today. Pattern-making should be essentially practical. TOM GOURDIE

Trade literature

'Selected British Technical Journals', Federation of British Industries, 2s from FBI, 21 Tothill Street, London SW1. A list of some of the leading technical journals published in this country, covering most branches of engineering and applied science.

'An Insight into Plastics Moulding', The Plastics Mouldings Division, Hellerman Ltd, from Hellerman Ltd, Crawley, Sussex.

'Metal Box Polytainers', plastics bottles, closures and fittings, from The Metal Box Co, Plastics Group, from 37 Baker Street, London W1

'Easilyne' taps and fittings, Sanbra Ltd, from Sanbra Ltd, Aston Hall Road, Birmingham 6. A brochure of 'Easilyne' taps and fittings, well designed, but spoilt by retouched half tones and very bad line drawings.

Correction

DESIGN January page 59: the price of the occasional table made by the Loughborough Cabinet Manufacturing Co was incorrectly quoted as £19 6s 9d, it should have read £9 19s 6d.

Design's index

The index to DESIGN (Design 1957, Volumes 9 and 10) will be sent only to those readers who request it from the Circulation Manager, 28 Haymarket, SW1. Copies of DESIGN for 1957 can be bound in two volumes at 17s 6d each volume. Copies should be sent direct to Benham and Co Ltd, 12 Culver Street, Colchester, Essex. Readers having copies bound need not order a separate index as this is included in the bound volumes.

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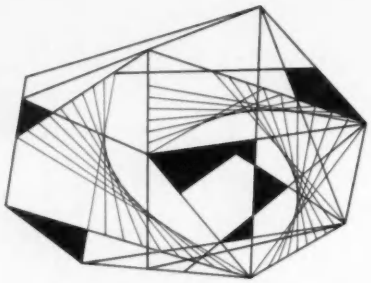
Addresses of designers may be obtained from the Editor.



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continued from page 79

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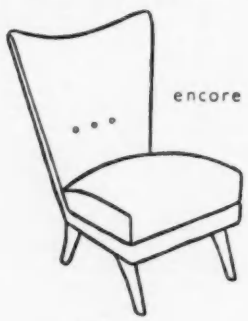

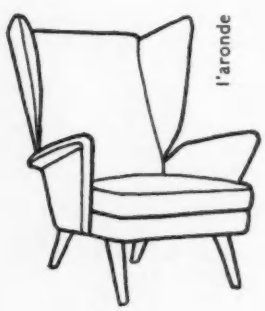

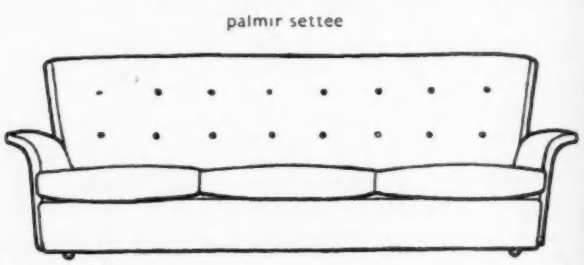

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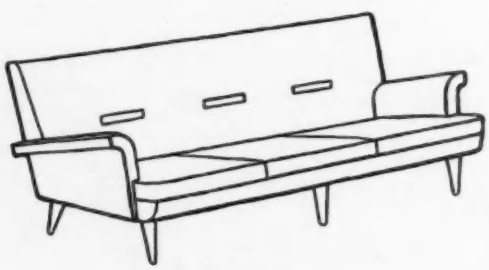

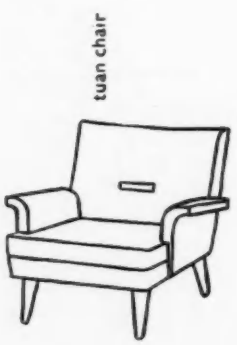

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